AWD Technologies

AWD TECHNOLOGIES

Owned by:
Guy F. Atkinson Company
Woodward-Clyde Consultants
The Dow Chemical Company

10 W. Orange Avenue, S. San Francisco, CA 94080
Telephone: 415/876-1133

UARTERLY GROUNDWATER MONITORING REPORT

5800 CHRISTIE STREET

EMERYVILLE, CALIFORNIA

4th Qtr 1989

MARCH 22, 1990

QUARTERLY GROUNDWATER MONITORING REPORT

5800 CHRISTIE STREET

EMERYVILLE, CALIFORNIA

4th Qtr 1989

MARCH 22, 1990

SUBMITTED TO:

MR. DENNIS BYRNE
ALAMEDA COUNTY HEALTH CARE SERVICES
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CALIFORNIA 94621

PREPARED FOR:

CROLEY & HERRING INVESTMENT COMPANY
1311 63RD STREET
EMERYVILLE, CALIFORNIA 94608

PREPARED BY:

AWD TECHNOLOGIES, INC.
10 WEST ORANGE AVENUE
SOUTH SAN FRANCISCO, CALIFORNIA 94080

AWD
TECHNOLOGIES

March 22, 1990

Mr. Steve Croley
Croley and Herring Investment Company
1311 63rd Street
Emeryville, CA 94608

Subject: Quarterly Report for Groundwater Monitoring
5800 Christie Avenue, Emeryville, California

Enclosed please find a copy of the quarterly status report regarding the results of groundwater sampling performed on February 20, 1990 at the subject facility.

Should you have any questions regarding the subject report, please contact me.

Sincerely yours,

Walter Loo
Director of Remediation

WWL/isw

Enclosure

AWD Technologies, Inc. 10 West Orange Avenue South San Francisco California 94080 Telephone 415 876 1133 Telex 34297 Telecopier 415 876 1143

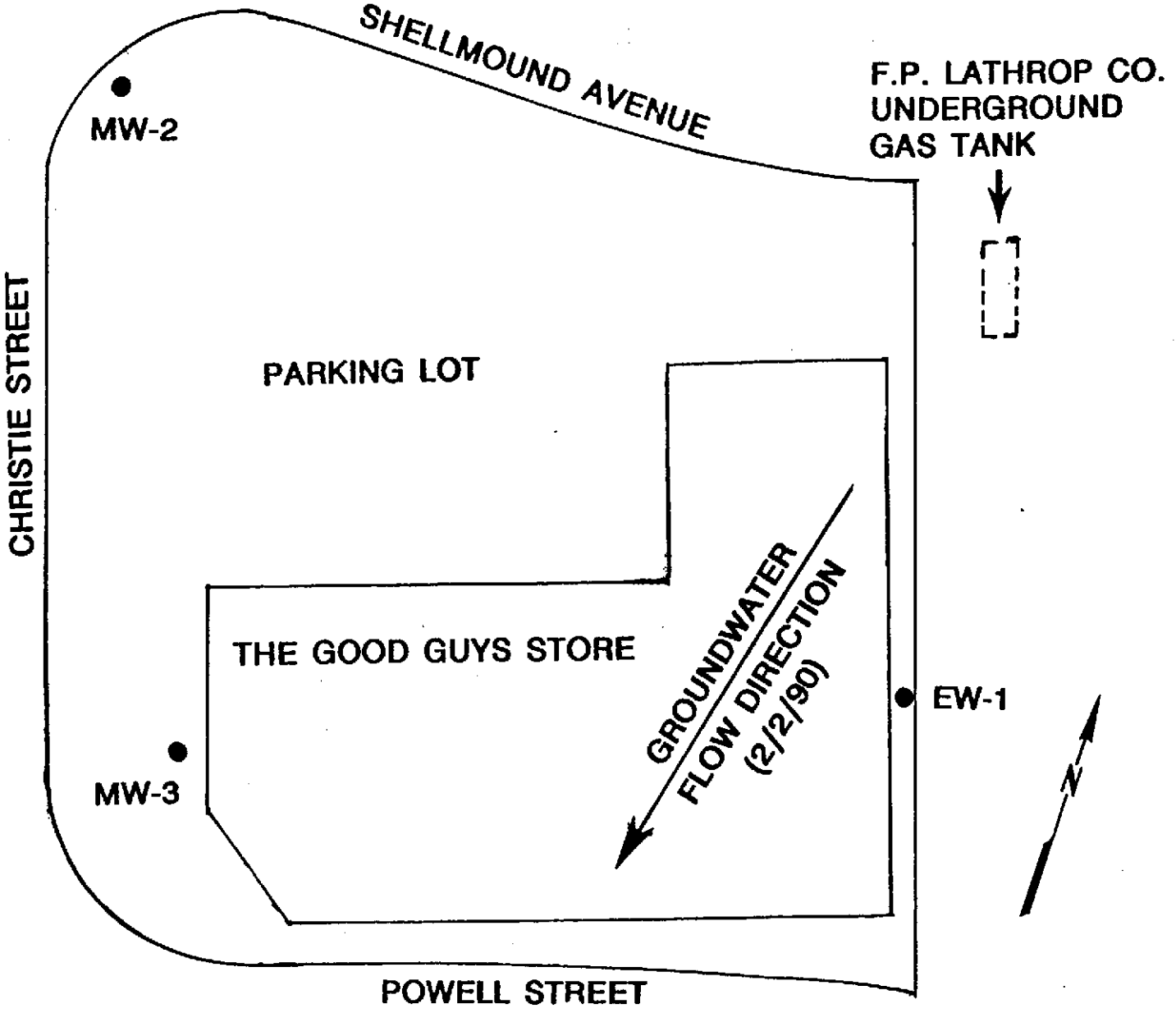
TABLE OF CONTENTS

1.0 INTRODUCTION

The Croley and Herring Investment Company (CHIC) facility is located on the southeast corner of Christie and Shellmound Avenues in Emeryville, California (Figure 1). Currently CHIC leases this property to The Good Guys, an electronic merchandise retailer. According to the previous investigations, soil contamination was identified. The soil containing solvents was removed from the area of concern and treated onsite. The contaminated soil was remediated and disposed of in Class III landfill in July 1989 on approval from the regulatory agency.

However, there were trace residual levels of volatile hydrocarbons remained in the soil in the close proximity of the excavated area. The facility has installed a vapor extraction system to abate the vapor trapped in the unsaturated soil after the Authority of Construct was received from Bay Area Air Quality Management District (BAAQMD). The system contains a blower connected to four venting wells and two 150-pound activated carbon canisters connected in series according to the specification provided by BAAQMD. The system is ready to operate pending inspection from BAAQMD.

As part of the site closure program, a quarterly groundwater monitoring program is required by Alameda County Health Services. There were two round of groundwater sampling performed from the three monitoring wells at the facility. The first round of water sampling took place on November 6, 1989 and the second round of water sampling took place on February 20, 1990. Water samples were sent to a State-certified laboratory for analysis under appropriate chain-of-custody procedures. This report incorporates the groundwater movement analysis, laboratory analytical results and a summary of findings.



LEGEND

● EXISTING WELL LOCATION

0 40 80

scale feet

AWD TECHNOLOGIES, INC

AWD TECHNOLOGIES

SITE LOCATION MAP
5800 CHRISTIE STREET
EMERYVILLE, CALIFORNIA

CUSTOMER: CHIC JOB NUMBER: 930-1000

DATE: 3/14/90 DRAWING NUMBER FIGURE 1 REV 0

2.0 GROUNDWATER LEVEL SURVEY

For groundwater movement analysis, water level was measured in the three existing groundwater monitoring wells EW-1, MW-2, and MW-3. Table 1 presents a summary of the water levels in the three wells from the two rounds of water sampling.

Based on water level data collected on February 20, 1990, water levels in wells EW-1 and MW-2 rose by 0.22 and 0.11 feet, respectively, and the water level in MW-3 dropped by 0.32 feet. The shallow groundwater flows toward the south and the gradient was 0.016 feet per foot of horizontal distance. The groundwater movement remained in the same direction as compared to the flow direction analyzed for the November 1989 sampling.

TABLE 1
SUMMARY OF WATER LEVEL DATA

	Elevation of TOC	11/6/89		2/20/90	
WELL ID	Ft (MSL)	DTW Ft	SWL Ft (MSL)	DTW Ft	SWL Ft (MSL)
EW-1	8.62	6.15	2.47	5.93	2.69
MW-2	7.42	4.37	3.05	4.26	3.16
MW-3	6.42	5.10	1.32	5.42	1.00

Note:

TOC is top of casing
DTW is depth to water table
SWL is static water level
MSL is mean sea level

3.0 GROUNDWATER QUALITY

Groundwater samples were collected from each of the three monitoring wells on February 20, 1990. The samples were analyzed using EPA Method 601 and 602 for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) as gasoline.

None of the VOCs were detected in wells MW-2 and MW-3. However, the concentrations of hydrocarbons has significantly increased from those detected in water samples collected on November 6, 1989. There are two new compounds (chloroethane and methylene chloride) appeared in the water sample collected from well EW-1. The following compounds were detected in well EW-1:

TPH as gasoline	12,000 ppb
Benzene	1,300 ppb
Toluene	3,600 ppb
Xylenes	47 ppb
Ethylbenzene	7.1 ppb
TCE	1,100 ppb
1,1 DCE	14 ppb
1,2 DCE	2,500 ppb
1,1,1 TCA	550 ppb
1,1 DCA	460 ppb
1,2 DCA	34 ppb
Chloroethane	29 ppb
Methylene Chloride	14 ppb

4.0 SUMMARY OF FINDINGS

Groundwater flow direction and gradient across the site are in a similar pattern as compared to the results from the previous Quarterly Monitoring Report (11/6/89). A summary of the flow direction and groundwater gradient are presented as following:

	4/25/89	11/6/89	2/20/90
Groundwater Flow Direction	Southwest	South	South
Hydraulic Gradient	0.00145	0.012	0.016

There are no hydrocarbons detected in wells MW-2 and MW-3 with concentrations above detection limits. The changes in water quality in well EW-1 are shown as follows:

	Concentrations in ppb		
	5/8/89	11/6/89	2/20/90
TPH as Gasoline	Not tested	740	12,000
Benzene	N.D.	180	1,300
Toluene	190	39	3,600
Xylenes	170	67	47
Ethylbenzene	N.D.	0.8	7.1
TCE	640	740	1,100
1,1 DCE	78	2.3	14
1,2 DCE	N.D.	350	2,500
1,1,1 TCA	N.D.	26	550
1,1 DCA	N.D.	34	460
1,2 DCA	N.D.	4.8	34
Vinyl Chloride	N.D.	29	N.D.
Chloroethane	N.D.	N.D.	29
Methylene Chloride	N.D.	N.D.	14

It is not uncommon to cause concentration fluctuation by a change in the water level. The increase in concentrations of chlorinated hydrocarbons in well EW-1 is likely caused, in part, by soil desorption due to the rise of water level and, in part, by a chemical breakdown process. The levels of gasoline and its constituents are alarming because of the fact that these compounds have significantly increased in concentration as compared to the

previous analytical results of sampling events performed in May and November 1989. The origin of gasoline and benzene may have come from a suspect upgradient source, the former F.P. Lathrop underground gasoline tank location (Figure 1). This needs to be confirmed. If confirmed, AWD will recommend to Alameda County Health Services that a groundwater extraction system at the source (F.P. Lathrop tank location) be installed to reverse the groundwater flow and remediate the gasoline and benzene plume.

APPENDIX A

Groundwater Quality Analysis Results

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

AWD Technologies
10 West Orange Ave.
So. San Francisco, CA 94080
Attn: Walter Loo

Date Sampled: 02-20-90
Date Received:02-20-90
Date Reported:02-21-90

Sample Number	Sample Description
020036	Proj. I.D.# CHIC-Emeryville MW-2 WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	0.6
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A V Dishman

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

AWD Technologies
10 West Orange Ave.
So. San Francisco, CA 94080
Attn: Walter Loo

Date Sampled: 02-20-90
Date Received:02-20-90
Date Reported:02-21-90

Sample Number	Sample Description
020037	Proj. I.D.# CHIC-Emeryville
	MW-3 WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A V Dishman

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

AWD Technologies
10 West Orange Ave.
So. San Francisco, CA 94080
Attn: Walter Loo

Date Sampled: 02-20-90
Date Received: 02-20-90
Date Reported: 02-21-90

Sample Number	Sample Description
020038	Proj. I.D.# CHIC-Emeryville EW-1 WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	12,000
Benzene	0.5	1,300
Toluene	0.5	3,600
Xylenes	0.5	47
Ethylbenzene	0.5	7.1

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.

MOBILE CHEM LABS

Joyce A W Dashneau

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

AWD Technology
#10 W. Orange Ave.
So. San Francisco, CA 94080
Attn: Walter Loo

Date Sampled:02-20-90
Date Received:02-20-90
Date Reported:03-03-90

Sample Number	Sample Description
020036	Proj. ID. CHIC-Emeryville Powel Christy MW-2 WATER

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Benzene	---	trans-1,2-Dichloroethene	<0.5
Bromomethane	<1.0	1,2-Dichloropropane	<0.5
Bromodichloromethane	<0.5	1,3-Dichloropropene	<0.5
Bromoform	<0.5	Ethylbenzene	---
Carbon tetrachloride	<0.5	Methylene chloride	<0.5
Chlorobenzene	<0.5	1,1,2,2-Tetrachloroethane	<0.5
Cloroethane	<1.0	Tetrachloroethene	<0.5
2-Chloroethylvinyl ether	<0.5	1,1,1-Trichloroethane	<0.5
Chloroform	<0.5	1,1,2-Trichloroethane	<0.5
Chloromethane	<1.0	Trichloroethene	<0.5
Dibromochloromethane	<0.5	Toluene	---
1,1-Dichloroethane	<0.5	Vinyl chloride	<1.0
1,2-Dichloroethane	<0.5	1,2-Dichlorobenzene	<0.5
1,1-Dichloroethene	<0.2	1,3-Dichlorobenzene	<0.5
		1,4-Dichlorobenzene	<0.5

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

NOTE: Analysis was performed using EPA methods 601

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

AWD Technology
#10 W. Orange Ave.
So. San Francisco, CA 94080
Attn: Walter Loo

Date Sampled:02-20-90
Date Received:02-20-90
Date Reported:03-03-90

Sample Number	Sample Description
020037	Proj. ID. CHIC-Emeryville Powel Christy MW-3 WATER

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Benzene	---	trans-1,2-Dichloroethene	<0.5
Bromomethane	<1.0	1,2-Dichloropropane	<0.5
Bromodichloromethane	<0.5	1,3-Dichloropropene	<0.5
Bromoform	<0.5	Ethylbenzene	---
Carbon tetrachloride	<0.5	Methylene chloride	<0.5
Chlorobenzene	<0.5	1,1,2,2-Tetrachloroethane	<0.5
Cloroethane	<1.0	Tetrachloroethene	<0.5
2-Chloroethylvinyl ether	<0.5	1,1,1-Trichloroethane	<0.5
Chloroform	<0.5	1,1,2-Trichloroethane	<0.5
Chloromethane	<1.0	Trichloroethene	<0.5
Dibromochloromethane	<0.5	Toluene	---
1,1-Dichloroethane	<0.5	Vinyl chloride	<1.0
1,2-Dichloroethane	<0.5	1,2-Dichlorobenzene	<0.5
1,1-Dichloroethene	<0.2	1,3-Dichlorobenzene	<0.5
		1,4-Dichlorobenzene	<0.5

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

NOTE: Analysis was performed using EPA methods 601

MOBILE CHEM LABS INC.

1678 Reliez Valley Road
Lafayette, CA 94549 • (415) 945-1266

AWD Technology
#10 W. Orange Ave.
So. San Francisco, CA 94080
Attn: Walter Loo

Date Sampled:02-20-90
Date Received:02-20-90
Date Reported:03-03-90

Sample Number	Sample Description
020038	Proj. ID. CHIC-Emeryville Powel Christy EW-1 WATER

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Benzene	---	trans-1,2-Dichloroethene	2,500
Bromomethane	<1.0	1,2-Dichloropropane	<0.5
Bromodichloromethane	<0.5	1,3-Dichloropropene	<0.5
Bromoform	<0.5	Ethylbenzene	---
Carbon tetrachloride	<0.5	Methylene chloride	14
Chlorobenzene	<0.5	1,1,2,2-Tetrachloroethane	<0.5
Cloroethane	29	Tetrachloroethene	<0.5
2-Chloroethylvinyl ether	<0.5	1,1,1-Trichloroethane	550
Chloroform	<0.5	1,1,2-Trichloroethane	<0.5
Chloromethane	<1.0	Trichloroethene	1,100
Dibromochloromethane	<0.5	Toluene	---
1,1-Dichloroethane	460	Vinyl chloride	<1.0
1,2-Dichloroethane	34	1,2-Dichlorobenzene	<0.5
1,1-Dichloroethene	14	1,3-Dichlorobenzene	<0.5
		1,4-Dichlorobenzene	<0.5

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

NOTE: Analysis was performed using EPA methods 601

1678 Rellez Valley Road
Lafayette, CA 94549 • (415) 945-1266

#10 W. ORANGE AVE.
So. San Fran, CA 94080

CHAIN OF CUSTODY RECORD

PROJECT NO.: Chic-Emeryville Powell Christy
SITE NAME & ADDRESS: ATTN: WALTER LOO
SAMPLERS NAME & COMPANY ADDRESS: AWD Technology #10 W Orange Ave

I.D. NO.	DATE	TIME	SOIL	WATER	SAMPLING LOCATION	ANALYSIS REQUESTED: Btex TPH GAS	Solvents 601						REMARKS
Shellwood Chic Christy	2/20	1540		✓	MW-2	X	✓						
Powell Christy	2/20	2:40 pm		✓	MW-3	X	✓						
EW1	2/20	5:00 pm		✓	EW-1	X	✓						

TURN AROUND TIME FOR ANALYSIS:
RUSH _____
NO RUSH 2 weeks

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
Dave Kevin	2/20	5:30	
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:

1) Have all samples received been stored in ice? _____

2) Did any VOA samples received have any head space? _____

3) Were samples in appropriate containers and packaged properly? _____

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 30, 1996

Mr. Richard Herring
Croley & Herring Investment Company
353 Beacon Ridge Lane
Walnut Creek, California 94596

RE: 5800 Christie Avenue, Emeryville, California 94608
(SLIC # 334)

Dear Mr. Herring:

This letter clarifies our telephone conversation today concerning the investigation / remediation of the chlorinated solvent contamination at the above referenced site.

Based on the data submitted to date for the site, no further remediation of the chlorinated solvent contamination is required at this time. However, groundwater monitoring program must be continued as stated in my letter dated September 18, 1996.

If you have any questions regarding this letter or the subject site, please contact me at (510) 567-6780.

Sincerely,

Susan L. Hugo

Susan L. Hugo
Senior Hazardous Materials Specialist

c: Mee Ling Tung, Director, Environmental Health
Sum Arigala, San Francisco Bay RWQCB
Christine Noma, Wendel, Rosen, Black & Dean,
1111 Broadway, 24th Floor, Oakland, CA 94607-4036
Walter Loo, ETS, 2081 15th Street, San Francisco, CA 94114
SH - files

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 2

To CHRISTINE NOMA	From SUSAN HUGO
Co.	Co. ACDEH
Dept.	Phone #
Fax # (510) 834-1928	Fax # (510) 337-9335

Alameda, CA 94502-6577
(510) 567-6700 FAX (510) 337-9335

September 18, 1996

Mr. Richard Herring
Croley & Herring Investment Company
353 Beacon Ridge Lane
Walnut Creek, California 94596

RE: 5800 Christie Avenue, Emeryville, California 94608
(SLIC # 334)

Dear Mr. Herring:

The Alameda County Department of Environmental Health, Environmental Protection Division has reviewed the Draft Groundwater Case Closure Request (August 1996) prepared by Environment & Technology Services and submitted under cover letter dated August 20, 1996 by Ms. Christine Noma of Wendel, Rosen, Black & Dean for the above referenced site.

This office has the following comments regarding the soil / groundwater investigation at the subject site:

1) Groundwater monitoring wells MW-2 and MW-3 (previously dropped from the sampling program) which have been measured for groundwater elevation levels can be closed. However, you will need to locate a third well (in addition MW-4 and EW-1) that can be used to establish groundwater flow direction at the site.

2) Chlorinated solvents have not been detected in groundwater monitoring well MW-4 during the last four sampling events (1/19/94, 1/25/95, 9/18/95,3/25/96). Therefore, this target compound can be dropped from the sampling program. However, continued groundwater monitoring must occur in well MW-4 to establish that the plume is stable and not migrating off site. Well MW-4 should be sampled every six months for the following target compounds: TPH as gasoline, benzene (B), toluene (T), ethyl benzene (E), xylene (X) and methyl tertiary butyl ether (MTBE).

3) Monitoring well EW-1 is still detecting the presence of aromatic hydrocarbons. The last sampling event collected on 7/11/96 showed aromatic hydrocarbons at the following concentrations : 5,870 ppb toluene, 13 ppb xylene, 55 ppb ethylbenzene. Monitoring well EW-1 should be sampled every six months for the following target compounds: TPH gasoline, BTEX and MTBE.

Mr. Richard Herring
RE: 5800 Christie Avenue, Emeryville, CA 94608
September 18, 1996
Page 2 of 2

The contents of this letter have been discussed with Sum Arigala of the San Francisco Bay RWQCB.

If you have any questions regarding this letter or the subject site, please contact me at (510) 567-6780.

Sincerely,

Susan L. Hugo

Susan L. Hugo
Senior Hazardous Materials Specialist

c: Mee Ling Tung, Director, Environmental Health
Sum Arigala, San Francisco Bay RWQCB
Christine Noma, Wendel, Rosen, Black & Dean,
1111 Broadway, 24th Floor, Oakland, CA 94607-4036
Walter Loo, ETS, 2081 15th Street, San Francisco, CA 94114
SH - files

HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

May 2, 1997

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

Mr. Richard Herring
Croley & Herring Investment Company
353 Beacon Ridge Lane
Walnut Creek, California 94596

RE: 5800 Christie Avenue, California 94608 (SLIC # 334)

Dear Mr. Herring:

This department has reviewed the " Request for Final Closure and Groundwater Monitoring Report" dated January 1997, prepared by Environment & Technology Services (ETS) and submitted under cover letter by Ms. Christine Noma of Wendel, Rosen Black & Dean on February 28, 1997 for the above referenced site.

Groundwater sample collected from well EW-1 during the last sampling event on 1/22/97 showed TPH gasoline (30,000 ppb), benzene (7 ppb), toluene (3,220 ppb), ethylbenzene (12 ppb) and xylene (55 ppb). The groundwater sample collected from MW-4 found TPH gasoline (2,480 ppb), benzene (659 ppb), toluene (95 ppb), ethylbenzene (58 ppb), xylene (104 ppb) and PAHs (95 ppb acenaphthene, 70 ppb acenaphthylene & 3,900 ppb naphthalene). MTBE was not detected in both wells. An off-site well (C-3) which is adjacent to the subject site was sampled. Analytic results showed TPH gasoline (2,830 ppb), benzene (818 ppb), toluene (91 ppb), ethylbenzene (123 ppb) xylene (139 ppb) and PAHs (150 ppb acenaphthene, 53 ppb acenaphthylene, 4800 ppb naphthalene, 31 ppb fluorene & 71 ppb phenanthrene).

The groundwater monitoring program must be continued at the subject site. Monitoring wells EW-1 and MW-4 must be sampled every six months for the following target compounds: TPH gasoline, benzene, toluene, ethylenbenzene, xylene and PAHs. After one year of additional groundwater monitoring, the historical data collected for the site can be evaluated to determine if the site can be closed as a low risk groundwater case.

Please contact me at (510) 567-6780 concerning any questions you may have regarding this letter or the subject site.

Sincerely,

Susan L. Hugo
Senior Hazardous Materials Specialist

c: Mee Ling Tung, Director, Environmental Health
Gordon Coleman, Chief, Environmental Protection Division
Sum Arigala, San Francisco Bay RWQCB
SH / files

CAMBRIA

To:	Susan Hugo
Company:	ACDEH
Address:	1131 Harbor Bay Parkway, Suite 250
	Alameda, CA 94502-6577
Phone:	--
From:	J. Theisen
Phone:	(510) 420-3302
Pages:	--
Date:	**March 5, 1999**
Re:	Lathrop/Croley Herring properties

Transmittal

Susan: As we have discussed, enclosed is our report addressing the status of the Lathrop and Croley Herring sites in Emeryville. I have enclosed a second copy which you may want to forward to Ravi A. of the RWQCB. Thanks for your cooperation on this case, and please call if you have questions.

JRT.

cc (w/enclosure): J. Wilson; Crosby Heafey Roach and May, Oakland, CA
R. Herring; Croley and Herring Investment Company, Walnut Creek, CA

3/10/99
Chris - our revised ground water flow direction charts and Walter letter of explanation were attached to the original going to Susan thurs.

Cambria Environmental Technology, Inc. 1144 65th Street Suite B Oakland, CA 94608 Tel (510) 420-0700 Fax (510) 420-9170

ATTACHMENT 1

FOUNDATION EXCAVATION SOIL ANALYSIS RESULTS

McLaren Analytical Laboratory
Chain of Custody Record

№ 211454

L. P. 1666

PROJECT DESIGNATION CHIC 2.0 SAMPLES TAKEN BY:* Gerrit Rost

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE: WATER COMP	SAMPLE TYPE: WATER GRAB	SAMPLE TYPE: SOIL	SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
	~~SB~~ HA 10 3.5'	4-4-89				✓	5228	Brass tube	8240 (24133)
	~~SB~~ HA 8 3.5'					✓	5229	"	" (24134)
	HA 9 3.5'					✓	5230	"	" (24135)
	HA 6 3.5'					✓	5231	"	" (24136)
	HA 5 2.7'					✓	5232	"	" (24137)
	HA 7 3.5'					✓	5233	"	" (24138)
	HA 11 2.5'					✓	5234	"	" (24139)
	HA 4 2'					✓	5235	"	" (24140)
	HA 1 2¼'	"				✓	5236	"	" (24141)

FIELD DISPOSITION:

IMMEDIATE DELIVERY ☐

STORAGE ☒ REFRIGERATOR ☐ ID _____ SECURED ☐ YES

ON ICE FREEZER ☐ ID _____ ☐ NO

RELINQUISHED BY:*	RECEIVED BY:*	DATE/TIME
Gerrit Rost Gerrit Rost		4-14-89 1700
RELINQUISHED BY:*	RECEIVED BY:*	DATE/TIME
RECEIVED FOR LABORATORY BY:*		DATE/TIME
S. L		4/15/89 9 A.M

METHOD OF SHIPMENT: Fed Ex

LABORATORY DISPOSITION:

IMMEDIATE ANALYSIS ☐ SAMPLES RECEIVED IN GOOD CONDITION

Reg. Turnaround

REFRIGERATOR ☑ ID 4 528 SECURED

FREEZER ☐ ID _____ ☑ YES ☐ NO

CABINET ☐ ID _____

* PRINT NAME AFTER SIGNATURE

McLaren Environmental Engineering
11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 Lab ID: 24141

Sample Location: HA1 2 1/4' Date Sampled: 04/14/89

Sample Number: 5236 Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	67.	25.
Acetone	< 5	25.
Carbon Disulfide	< 5	5.
1,1-Dichloroethene	< 5	5.
1,1-Dichloroethene	< 5	5.
1,2-Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
1,2-Dichloroethane	< 5	5.
2-Butanone	< 25	25.
1,1,1,-Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2-Dichloropropane	< 5	5.
Trans-1,3-Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2-Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis-1,3-Dichloropropene	< 5	5.
Bromoform	< 5	5.
4-Methyl-2-pentanone	< 25	25.
2-Hexanone	< 25	25.
1,1,2,2-Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	19.	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylene	< 5	5.
Freon 113	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24141

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	108	70-121
S2 = D8-Toluene	101	81-117
S3 = 4-Bromofluorobenzene	98	74-121

Comments:

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 Lab ID: 24140

Sample Location: HA4 2' Date Sampled: 04/14/89

Sample Number: 5235 Date Analyzed: 04/23/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	130.	25.
Acetone	< 5	25.
Carbon Disulfide	< 5	5.
1,1-Dichloroethene	< 5	5.
1,1-Dichloroethene	< 5	5.
1,2-Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
1,2-Dichloroethane	< 5	5.
2-Butanone	< 25	25.
1,1,1,-Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2-Dichloropropane	< 5	5.
Trans-1,3-Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2-Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis-1,3-Dichloropropene	< 5	5.
Bromoform	< 5	5.
4-Methyl-2-pentanone	< 25	25.
2-Hexanone	< 25	25.
1,1,2,2-Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	160.	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylene	< 5	5.
Freon 113	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24140

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	104	70-121
S2 = D8-Toluene	111	81-117
S3 = 4-Bromofluorobenzene	102	74-121

Comments:

McLaren

HA 5 WWL 4/28/89

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 Lab ID: 24137

Sample Location: HA4 2.7' Date Sampled: 04/14/89

Sample Number: 5232 Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 5	25.
Carbon Disulfide	< 5	5.
1,1-Dichloroethene	< 5	5.
1,1-Dichloroethene	< 5	5.
1,2-Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
1,2-Dichloroethane	< 5	5.
2-Butanone	< 25	25.
1,1,1,-Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2-Dichloropropane	< 5	5.
Trans-1,3-Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2-Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis-1,3-Dichloropropene	< 5	5.
Bromoform	< 5	5.
4-Methyl-2-pentanone	< 25	25.
2-Hexanone	< 25	25.
1,1,2,2-Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	80.	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylene	< 5	5.
Freon 113	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24137

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	103	70-121
S2 = D8-Toluene	87	81-117
S3 = 4-Bromofluorobenzene	108	74-121

Comments:

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0

Lab ID: 24136

Sample Location: HA6 3.5'

Date Sampled: 04/14/89

Sample Number: 5231

Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 50	50.
Bromomethane	< 50	50.
Vinyl Chloride	< 50	50.
Chloroethane	< 50	50.
Methylene Chloride	130.	125.
Acetone	< 125	125.
Carbon Disulfide	< 25	25.
1,1-Dichloroethene	< 25	25.
1,1-Dichloroethene	< 25	25.
1,2-Dichloroethene(cis/trans)	< 25	25.
Chloroform	< 25	25.
1,2-Dichloroethane	< 25	25.
2-Butanone	< 125	125.
1,1,1,-Trichloroethane	< 25	25.
Carbon Tetrachloride	< 25	25.
Bromodichloromethane	< 25	25.
1,2-Dichloropropane	< 25	25.
Trans-1,3-Dichloropropene	< 25	25.
Trichloroethene	< 25	25.
Benzene	< 25	25.
1,1,2-Trichloroethane	< 25	25.
Dibromochloromethane	< 25	25.
Cis-1,3-Dichloropropene	< 25	25.
Bromoform	< 25	25.
4-Methyl-2-pentanone	< 125	125.
2-Hexanone	< 125	125.
1,1,2,2-Tetrachloroethane	< 25	25.
Tetrachloroethylene	< 50	50.
Toluene	120.	25.
Chlorobenzene	< 25	25.
Ethyl Benzene	< 25	25.
Styrene	< 25	25.
Total Xylene	< 25	25.
Freon 113	< 25	25.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24136

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	104	70-121
S2 = D8-Toluene	92	81-117
S3 = 4-Bromofluorobenzene	96	74-121

Comments: 1:5 dilution used in analysis.

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 Lab ID: 24138

Sample Location: HA7 3.5' Date Sampled: 04/14/89

Sample Number: 5233 Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 50	50.
Bromomethane	< 50	50.
Vinyl Chloride	< 50	50.
Chloroethane	< 50	50.
Methylene Chloride	< 125 *	125.
Acetone	< 125	125.
Carbon Disulfide	< 25	25.
1,1-Dichloroethene	< 25	25.
1,1-Dichloroethene	< 25	25.
1,2-Dichloroethene(cis/trans)	< 25	25.
Chloroform	< 25	25.
1,2-Dichloroethane	< 25	25.
2-Butanone	< 125	125.
1,1,1,-Trichloroethane	< 25	25.
Carbon Tetrachloride	< 25	25.
Bromodichloromethane	< 25	25.
1,2-Dichloropropane	< 25	25.
Trans-1,3-Dichloropropene	< 25	25.
Trichloroethene	< 25	25.
Benzene	< 25	25.
1,1,2-Trichloroethane	< 25	25.
Dibromochloromethane	< 25	25.
Cis-1,3-Dichloropropene	< 25	25.
Bromoform	< 25	25.
4-Methyl-2-pentanone	< 125	125.
2-Hexanone	< 125	125.
1,1,2,2-Tetrachloroethane	< 25	25.
Tetrachloroethylene	< 50	50.
Toluene	72.	25.
Chlorobenzene	< 25	25.
Ethyl Benzene	< 25	25.
Styrene	< 25	25.
Total Xylene	< 25	25.
Freon 113	< 25 *	25.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24138

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	108	70-121
S2 = D8-Toluene	97	81-117
S3 = 4-Bromofluorobenzene	103	74-121

Comments: * Methylene chloride and freon were detected at 110 ppb and 14 ppb respectively which were less than the raised reporting limit.
1:5 dilution used in analysis.

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 | Lab ID: 24134

Sample Location: HA8 3.5' | Date Sampled: 04/14/89

Sample Number: 5229 | Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 50	50.
Bromomethane	< 50	50.
Vinyl Chloride	< 50	50.
Chloroethane	< 50	50.
Methylene Chloride	< 125 *	125.
Acetone	< 125	125.
Carbon Disulfide	< 25	25.
1,1-Dichloroethene	< 25	25.
1,1-Dichloroethene	< 25	25.
1,2-Dichloroethene(cis/trans)	< 25	25.
Chloroform	< 25	25.
1,2-Dichloroethane	< 25	25.
2-Butanone	< 125	125.
1,1,1,-Trichloroethane	< 25	25.
Carbon Tetrachloride	< 25	25.
Bromodichloromethane	< 25	25.
1,2-Dichloropropane	< 25	25.
Trans-1,3-Dichloropropene	< 25	25.
Trichloroethene	< 25	25.
Benzene	< 25	25.
1,1,2-Trichloroethane	< 25	25.
Dibromochloromethane	< 25	25.
Cis-1,3-Dichloropropene	< 25	25.
Bromoform	< 25	25.
4-Methyl-2-pentanone	< 125	125.
2-Hexanone	< 125	125.
1,1,2,2-Tetrachloroethane	< 25	25.
Tetrachloroethylene	< 50	50.
Toluene	48.	25.
Chlorobenzene	< 25	25.
Ethyl Benzene	< 25	25.
Styrene	< 25	25.
Total Xylene	< 25	25.
Freon 113	< 25	25.

Analyst: K. Badal | Reviewed By: R. L. James | Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24134

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	111	70-121
S2 = D8-Toluene	102	81-117
S3 = 4-Bromofluorobenzene	109	74-121

Comments: * Methylene chloride was detected at 73 ppb which was less than the raised reporting limit.
1:5 dilution used in analysis.

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 | Lab ID: 24135

Sample Location: HA9 3.5' | Date Sampled: 04/14/89

Sample Number: 5230 | Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 50	50.
Bromomethane	< 50	50.
Vinyl Chloride	< 50	50.
Chloroethane	< 50	50.
Methylene Chloride	< 125 *	125.
Acetone	< 125	125.
Carbon Disulfide	< 25	25.
1,1-Dichloroethene	< 25	25.
1,1-Dichloroethene	< 25	25.
1,2-Dichloroethene(cis/trans)	< 25	25.
Chloroform	< 25	25.
1,2-Dichloroethane	< 25	25.
2-Butanone	< 125	125.
1,1,1,-Trichloroethane	< 25	25.
Carbon Tetrachloride	< 25	25.
Bromodichloromethane	< 25	25.
1,2-Dichloropropane	< 25	25.
Trans-1,3-Dichloropropene	< 25	25.
Trichloroethene	< 25	25.
Benzene	< 25	25.
1,1,2-Trichloroethane	< 25	25.
Dibromochloromethane	< 25	25.
Cis-1,3-Dichloropropene	< 25	25.
Bromoform	< 25	25.
4-Methyl-2-pentanone	< 125	125.
2-Hexanone	< 125	125.
1,1,2,2-Tetrachloroethane	< 25	25.
Tetrachloroethylene	< 50	50.
Toluene	< 25 *	25.
Chlorobenzene	< 25	25.
Ethyl Benzene	< 25	25.
Styrene	< 25	25.
Total Xylene	< 25	25.
Freon 113	< 25	25.

Analyst: L. A. Mooney | Reviewed By: R. L. James | Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24135

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	100	70-121
S2 = D8-Toluene	95	81-117
S3 = 4-Bromofluorobenzene	107	74-121

Comments: * Methylene chloride and toluene were present at 63 ppb and 7 ppb respectively which were less than the raised reporting limit.
1:5 dilution used in analysis.

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 Lab ID: 24133

Sample Location: HA10 3.5' Date Sampled: 04/14/89

Sample Number: 5228 Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)	REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 50	50.
Bromomethane	< 50	50.
Vinyl Chloride	< 50	50.
Chloroethane	< 50	50.
Methylene Chloride	< 125 *	125.
Acetone	< 125	125.
Carbon Disulfide	< 25	25.
1,1-Dichloroethene	< 25	25.
1,1-Dichloroethene	< 25	25.
1,2-Dichloroethene(cis/trans)	< 25	25.
Chloroform	< 25	25.
1,2-Dichloroethane	< 25	25.
2-Butanone	< 125	125.
1,1,1,-Trichloroethane	< 25	25.
Carbon Tetrachloride	< 25	25.
Bromodichloromethane	< 25	25.
1,2-Dichloropropane	< 25	25.
Trans-1,3-Dichloropropene	< 25	25.
Trichloroethene	< 25	25.
Benzene	< 25	25.
1,1,2-Trichloroethane	< 25	25.
Dibromochloromethane	< 25	25.
Cis-1,3-Dichloropropene	< 25	25.
Bromoform	< 25	25.
4-Methyl-2-pentanone	< 125	125.
2-Hexanone	< 125	125.
1,1,2,2-Tetrachloroethane	< 25	25.
Tetrachloroethylene	< 50	50.
Toluene	49.	25.
Chlorobenzene	< 25	25.
Ethyl Benzene	< 25	25.
Styrene	< 25	25.
Total Xylene	< 25	25.
Freon 113	< 25	25.

Analyst: L. A. Mooney Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24133

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	112	70-121
S2 = D8-Toluene	99	81-117
S3 = 4-Bromofluorobenzene	98	74-121

Comments: * Methylene chloride was present at 71 ppb which was less than the raised reporting limit.
1:5 dilution used in analysis.

McLaren

HSL VOLATILE ORGANICS
EPA METHOD 8240

Project: CHIC 2.0 Lab ID: 24139

Sample Location: HA11 2.5' Date Sampled: 04/14/89

Sample Number: 5234 Date Analyzed: 04/24/89

COMPOUND	ANALYTE CONCENTRATION ug/kg (ppb)		REPORTING LIMIT ug/kg (ppb)
Chloromethane	< 50		50.
Bromomethane	< 50		50.
Vinyl Chloride	< 50		50.
Chloroethane	< 50		50.
Methylene Chloride	< 125	*	125.
Acetone	< 125		125.
Carbon Disulfide	< 25		25.
1,1-Dichloroethene	< 25		25.
1,1-Dichloroethene	< 25		25.
1,2-Dichloroethene(cis/trans)	< 25		25.
Chloroform	< 25		25.
1,2-Dichloroethane	< 25		25.
2-Butanone	< 125		125.
1,1,1,-Trichloroethane	< 25		25.
Carbon Tetrachloride	< 25		25.
Bromodichloromethane	< 25		25.
1,2-Dichloropropane	< 25		25.
Trans-1,3-Dichloropropene	< 25		25.
Trichloroethene	< 25		25.
Benzene	< 25		25.
1,1,2-Trichloroethane	< 25		25.
Dibromochloromethane	< 25		25.
Cis-1,3-Dichloropropene	< 25		25.
Bromoform	< 25		25.
4-Methyl-2-pentanone	< 125		125.
2-Hexanone	< 125		125.
1,1,2,2-Tetrachloroethane	< 25		25.
Tetrachloroethylene	< 50		50.
Toluene	30.		25.
Chlorobenzene	< 25		25.
Ethyl Benzene	< 25		25.
Styrene	< 25		25.
Total Xylene	< 25		25.
Freon 113	< 25		25.

Analyst: K. Badal Reviewed By: R.I. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24139

GCMS 8240 SURROGATE % RECOVERY

Compounds	% Recovery	Soil Matrix
S1 = D4-1,2-Dichloroethane	107	70-121
S2 = D8-Toluene	96	81-117
S3 = 4-Bromofluorobenzene	106	74-121

Comments: * Methylene chloride was detected at 43 ppb which was less than the raised reporting limit.
1:5 dilution used in analysis.

McLaren

ATTACHMENT 2

ALAMEDA COUNTY HEALTH CARE SERVICES AUTHORIZATION LETTER
4/13/89

NOTIFICATION OF INTENTION TO EXCAVATE
4/20/89

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

13 April, 1989

Mr. S.G. Crowley
1311 63rd Street
Emeryville, Ca. 94608

Subject: Soil Remediation at 5800 Christie Ave. Emeryville.

Dear Mr. Crowley:

Thank you for the fee deposit check, remediation action and site safety plans submitted to our office concerning the facility listed above. The plans have been reviewed by our staff and approval is granted for their implementation.

If you have any questions concerning this matter, please contact, Dennis Byrne, Hazardous Materials Specialist, at (415) 271-4320.

Sincerely,

Edgar B Howell for

Rafat A. Shahid, Chief,
Hazardous Materials Division

RAS:DB

cc; Walter Loo, Principal Geohydrologist
McLaren Environmental Engineering
980 Atlantic Avenue
Suite 100
Alameda, Ca. 94501

Walton

McLaren Environmental Engineering

April 20, 1989

Mr. Milton Feldstein
Air Pollution Control Officer
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Dear Mr. Feldstein:

NOTIFICATION OF INTENTION TO EXCAVATE

This letter presents Croley and Herring Investment Company's (CHIC) intention to excavate soil located on site at 5800 Christie Street, Emeryville, California. McLaren is the remediation consultant to CHIC. The scheduled starting date of this excavation is on or during the week of April 24, 1989.

The proposed total excavation will be less than 100 cubic yards of soil. Concentrations of organic compounds detected in the soil average less than 500 ppm. Organic compounds which have been detected include; Carbon Tetrachloride, Ethyl Benzene, Toluene, 1,1,1-Trichloroethane, Trichloroethene, Xylenes, and Gasoline.

Remediation action and site safety plans were submitted to and reviewed by the Alameda County Department of Environmental Health and approval was granted for their implementation (see attached letter). If you have any questions please call me at (415) 521-5200.

Sincerely,

Amy Brownell

Amy Brownell
Assistant Engineer

Attachment

0420LCD1

980 Atlantic Avenue, Suite 100, Alameda, CA 94501 (415) 521-5200
Headquarters: 11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

ATTACHMENT 3

SOIL DRILLING LOGS
WELLS MW-1, MW-2, & MW-3

SOIL DRILLING LOG

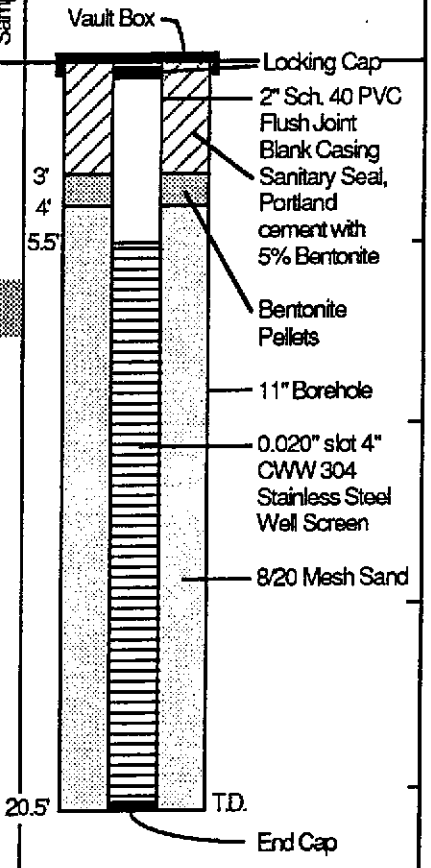
McLaren Environmental Engineering

SB/MW # : MW-1
D-
Page 1 of 1
Sampler: B. WRIGHT

PROJECT 5800 CHRISTIE LOCATION 88' SW OF SHELLMOUND, 4' NW OF BACK FENCE
ELEVATION 9.23' MSL MONITORING DEVICE LEL, 580 A OVM; DRAEGER
SAMPLING DATE(S) 4/21/89 START 0930 FINISH 1140
SAMPLING METHOD CALIFORNIA SPLIT SPOON SUBCONTRACTOR & EQUIPMENT AQUA SCIENCE ENGINEERS, MOBILE DRILL B-61
MEMO HAND AUGER TO 4.5 FEET

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
						Grayish brown (2.5Y 5/2) gravelly sand, unconsolidated, well graded slightly moist.	SW		
5'	3-2	5	4.5-5.5			Very dark gray (2.5Y 3/0) to greenish gray (5GY 6/1) at 3.0'; silty clay, high plasticity, medium stiff, slightly moist common gravel and debris.	CL		
	2-1-1	2	6.0-7.5	29105					
10'	1-1-1	2	10.0-11.5			Black (2.5Y 2/0) silty clay, soft, sticky, satruated, organic odor.	OL		
15'	4-6-14	20	15.0-16.5			Light yellowish brown (2.5Y 6/4) gravelly sand, unconsolidated, well graded, clay to medium pebble gravel, saturated, 21' sample same as above with 20% clay matrix, moist.	SW		
20'	6-8-13	21	21.0-22.5						
25'									
30'									

Well Construction Details



SIGNATURE OF FIELD SUPERVISOR

TITLE

SIGNATURE OF REVIEWER

TITLE

SOIL DRILLING LOG

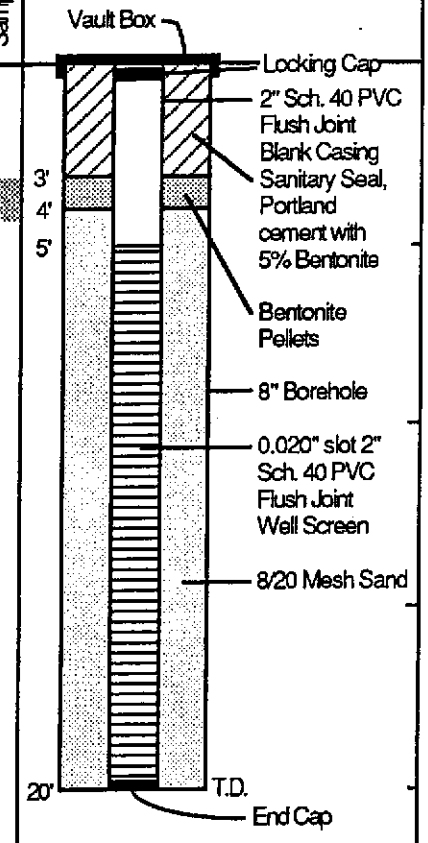
McLaren Environmental Engineering

SB/MW # : MW-2
D-
Page 1 of 1
Sampler: B. WRIGHT

PROJECT 5800 CHRISTIE LOCATION 8' SW OF SHELLMOUND, 15' E OF CHRISTIE EMERYVILLE
ELEVATION 7.42' MSL MONITORING DEVICE LEL, 580 A OVM; DRAEGER
SAMPLING DATE(S) 4/20/89 START 0800 FINISH 1115
SAMPLING METHOD CALIFORNIA SPLIT SPOON SUBCONTRACTOR & EQUIPMENT AQUA SCIENCE ENGINEERS, MOBILE DRILL B-61
MEMO HAND AUGER TO THREE FEET

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
					1.0	Light olive brown (2.5Y 5/4) clayey sand, poorly graded, unconsolidated, moist.	SC		
	2-3-5	8	3.0-4.5	29103	0.0	Very dark gray (10YR 3/1) sandy clay, medium plasticity, soft, common coarse gravels, and construction debris, moist.	CL		
5'	2-1-1	2	6.0-		0.0	Dark greenish gray (5GY 4/1) silty sand, poorly graded silt to fine sand, dense saturated	SM		
						Very dark gray (2.5Y 3/0) silty clay, low plasticity, very soft, sticky, common fine sand, saturated, organic odor.	OL		
10'	1-1-3	4	10.0-11.5		0.0				
					0.8	Very dark gray (2.5Y 5/4) silty sand, soft, dense, very moist, mild organic odor.	SM		
						Light olive brown (2.5Y 5/4) silty sand, dense, poorly graded fine sand, very moist.	SP		
15'	8-9-13	22	15.0-16.5		0.0	Olive brown (2.5Y 4/4) gravelly sand, unconsolidated, well graded fine sand to fine subrounded pebble gravels, saturated.	SW		
20'	8-12-14	26	20.0-21.5		0.0	Light olive brown (2.5Y 5/4) silty clay, common embedded pebble gravels, high plasticity, very stiff, slightly moist.	CL		
25'									
30'									

Well Construction Details



SIGNATURE OF FIELD SUPERVISOR

TITLE

SIGNATURE OF REVIEWER

TITLE

SOIL DRILLING LOG

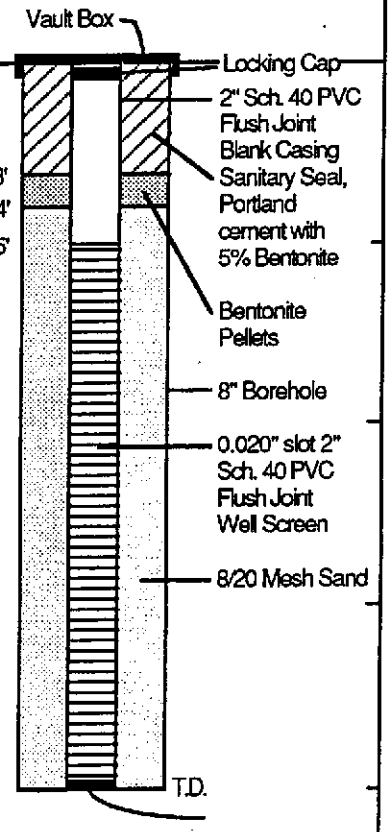
McLaren Environmental Engineering

SB/MW # : MW-3
D-
Page 1 of 1
Sampler: B. WRIGHT

PROJECT 5800 CHRISTIE LOCATION 20' N OF POWELL ST., 13' E OF CHRISTIE EMERYVILLE
ELEVATION 8.51' MSL MONITORING DEVICE LEL, 580 A OVM; DRAEGER
SAMPLING DATE(S) 4/20/89 START 1340 FINISH 1435
SAMPLING METHOD CALIFORNIA SPLIT SPOON SUBCONTRACTOR & EQUIPMENT AQUA SCIENCE ENGINEERS, MOBILE DRILL B-61
MEMO HAND AUGER TO THREE FEET

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: Eff	Sampler Depth Interval (ft.)	Sample ID #	OVM reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
						Grayish brown (2.5Y 5/2) gravelly sand, well graded construction fill, slightly moist.	SW		
	5-8-14	22	3.0-4.5		0.0	Dark greenish gray (5GY 4/1) silty clay, medium plasticity, stiff common construction debris, slightly moist.	CL		
5'	2-2-2	4	4.5-6.0		0.0				
	1-1-1	2	6.5-8.0	29104	0.0	Dark gray (5Y 4/1) silty clay, trace fine sand, medium plasticity, soft, very moist.	SP		
	2-2-2	4	8.0-9.5		0.0	Olive brown (2.5Y 4/4) clayey sand, poorly graded fine sand, soft, sticky, saturated.	CL SW		
10'			9.5-11.0			Grayish brown (2.5Y 5/2) silty clay, soft, sticky, very moist to saturated, gravelly sand at 9.0'-9.5'.	OL		
						Very dark gray (2.5Y 3/0) silty clay, soft, sticky, saturated, organic odor.			
15'	4-9-11	20	15.0-16.5		0.0	Mottled greenish gray (5GY 5/1) and olive yellow (2.5Y 6/6) sandy clay, low plasticity, stiff, slightly moist.	CL		
20'	5-7-11	18	20.0-21.5		0.0				
25'									
30'									

Well Construction Details



SIGNATURE OF FIELD SUPERVISOR

TITLE

SIGNATURE OF REVIEWER

TITLE

ATTACHMENT 4

GROUNDWATER ANALYSIS RESULTS

L.P. 1699

№ 209517

McLaren Analytical Laboratory
Chain of Custody Record

24 hr. rush

PROJECT DESIGNATION Ch.c-3.0

SAMPLES TAKEN BY:* Brad Wright Brad Wright

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE: WATER COMP	SAMPLE TYPE: WATER GRAB	SAMPLE TYPE: SOIL	SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED (24512)	
	MW-1	4/25/89	1200		X		028517	VOA	601	624
					X		028518	VOA	601	Spare
					X		028519	VOA	601	
					X		028520	VOA	601	
					X		028521	VOA	602	*
					X		028522	VOA	602	Spare *
					X		028523	VOA	602	*
					X		028524	VOA	602	*

FIELD DISPOSITION: FedEx #2030476726

*: Preserved w. 1:1 HCl

IMMEDIATE DELIVERY ☒

STORAGE ☐ REFRIGERATOR ☐ ID _____

FREEZER ☐ ID _____

SECURED ☐ YES ☐ NO

RELINQUISHED BY:* Brad Wright	RECEIVED BY:*	DATE/TIME 4/25/89 1400
RELINQUISHED BY:*	RECEIVED BY:*	DATE/TIME
RECEIVED FOR LABORATORY BY:* Michael N. Neuenburg MICHAEL N. NEUENBURG		DATE/TIME 4/26/89 10:00

METHOD OF SHIPMENT:

LABORATORY DISPOSITION:

IMMEDIATE ANALYSIS ☐ STORAGE ☐

REFRIGERATOR ☒ ID 3

FREEZER ☐ ID _____

CABINET ☐ ID _____

SECURED ☒ YES ☐ NO

SAMPLES RECEIVED IN GOOD CONDITION

* PRINT NAME AFTER SIGNATURE

McLaren Environmental Engineering
11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

L.P. 1699
№ 209519

McLaren Analytical Laboratory
Chain of Custody Record

24 hr rush

PROJECT DESIGNATION Chic-3.0 SAMPLES TAKEN BY:* Brad Weight Bradley

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE: WATER COMP	SAMPLE TYPE: WATER GRAB	SAMPLE TYPE: SOIL	SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
	MW-2	4/25/89	1040		X		028501	VOA	~~601~~ 624 (GM) (2450)
	↓	↓	↓		X		028502	VOA	~~601~~ spare
					X		028503	VOA	~~601~~ ↓
					X		028504	VOA	~~601~~ ↓
					X		028505	VOA	~~602~~ 624 ↓ Sp.
					X		028506	VOA	~~602~~ spare *
					X		028507	VOA	~~602~~ ↓ *
					X		028508	VOA	~~602~~ ↓ *

FIELD DISPOSITION: Fed Ex # 2030976726 * : preserved with HCL

IMMEDIATE DELIVERY ☒

STORAGE ☐ REFRIGERATOR ☐ ID _____ SECURED ☐ YES

FREEZER ☐ ID _____ ☐ NO

RELINQUISHED BY:* Brad Weight	RECEIVED BY:*	DATE/TIME 4/25/89 1400
RELINQUISHED BY:*	RECEIVED BY:*	DATE/TIME
RECEIVED FOR LABORATORY BY:* Michael N. Neuenburg MICHAEL N. NEUENBURG		DATE/TIME 4/26/89 10:00

METHOD OF SHIPMENT:

LABORATORY DISPOSITION:

IMMEDIATE ANALYSIS ☐

SAMPLES RECEIVED IN GOOD CONDITION

STORAGE ☐ REFRIGERATOR ☒ ID 3 SECURED

FREEZER ☐ ID _____ ☒ YES ☐ NO

CABINET ☐ ID _____

* PRINT NAME AFTER SIGNATURE

McLaren Environmental Engineering
11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

L.P. 1699

№ 209518

McLaren Analytical Laboratory
Chain of Custody Record

24 hr rush

PROJECT DESIGNATION Chic - 3.0

SAMPLES TAKEN BY:* Brad Wright Brad Wright

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE: WATER COMP	SAMPLE TYPE: WATER GRAB	SAMPLE TYPE: SOIL	SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED	
	MW-3	4/25/89	1125		X		028509	VOA	~~601~~ 2450 624	(60)
	↓	↓	↓		X		028510	VOA	~~601~~	spare
					X		028511	VOA	~~601~~	↓
					X		028512	VOA	~~601~~	
					X		028513	VOA	~~602~~	*
					X		028514	VOA	~~602~~	spare *
					X		028515	VOA	~~602~~	*
	↓	↓	↓		X		028516	VOA	~~602~~	↓ *

FIELD DISPOSITION: FedEx # 2030976726

*: Preserved with HCL

IMMEDIATE DELIVERY ☒

STORAGE ☐ REFRIGERATOR ☐ ID _____ SECURED ☐ YES

FREEZER ☐ ID _____ ☐ NO

RELINQUISHED BY:* Brad Wright	RECEIVED BY:*	DATE/TIME 4/25/89 1400
RELINQUISHED BY:*	RECEIVED BY:*	DATE/TIME
RECEIVED FOR LABORATORY BY:* Michael N. Neuenburg MICHAEL N. NEUENBURG		DATE/TIME 4/26/89 10:05

METHOD OF SHIPMENT:

LABORATORY DISPOSITION:

IMMEDIATE ANALYSIS ☐ STORAGE ☐ REFRIGERATOR ☒ ID 3 SECURED

SAMPLES RECEIVED IN GOOD CONDITION FREEZER ☐ ID _____ ☒ YES ☐ NO

CABINET ☐ ID _____

* PRINT NAME AFTER SIGNATURE

McLaren Environmental Engineering
11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

L.P. 1699

№ 209516

McLaren Analytical Laboratory

Chain of Custody Record

24 hr wash

PROJECT DESIGNATION Chic - 3.0

SAMPLES TAKEN BY:* Brad Wright Brad Wright

AREA	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE: WATER COMP	SAMPLE TYPE: WATER GRAB	SAMPLE TYPE: SOIL	SAMPLE NO.	TYPE CONTAINER(S)	ANALYSIS REQUIRED
	Trip Blank	4/25/89	1000		X		028525	VOA	601 624 (SA)
					X		028526	VOA	601 Spare
					X		028527	VOA	601
					X		028528	VOA	602 *
					X		028529	VOA	602 Spare *
					X		028530	VOA	602 *

FIELD DISPOSITION: FedEx # 203057767296

*: preserved with HCl

IMMEDIATE DELIVERY ☒

STORAGE ☐ REFRIGERATOR ☐ ID _____

FREEZER ☐ ID _____

SECURED ☐ YES ☐ NO

RELINQUISHED BY:* Brad Wright	RECEIVED BY:*	DATE/TIME 4/25/89 1400
RELINQUISHED BY:*	RECEIVED BY:*	DATE/TIME
RECEIVED FOR LABORATORY BY:* Michael N. Neuenburg MICHAEL N. NEUENBURG		DATE/TIME 4/26/89 10:00

METHOD OF SHIPMENT:

LABORATORY DISPOSITION:

IMMEDIATE ANALYSIS ☐ STORAGE ☐

SAMPLES RECEIVED IN GOOD CONDITION

REFRIGERATOR ☒ ID 3

FREEZER ☐ ID _____

CABINET ☐ ID _____

SECURED ☒ YES ☐ NO

* PRINT NAME AFTER SIGNATURE

McLaren Environmental Engineering

11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

VOLATILE ORGANICS
MODIFIED EPA METHOD 624

Project: CHIC-3.0 Lab ID: 24512

Sample Location: MW-1 Date Sampled: 04/25/89

Sample Number: 028517 Date Analyzed: 04/27/89

COMPOUND	ANALYTE CONCENTRATION ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 25	25.
Carbon Disulfide	< 5	5.
1,1 Dichloroethene	< 5	5.
1,1 Dichloroethane	9.	5.
1,2 Dichloroethene(cis/trans)	9.	5.
Chloroform	< 5	5.
1,2 Dichloroethane	< 5	5.
2 Butanone	< 25	25.
1,1,1 Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2 Dichloropropane	< 5	5.
Trans 1,3 Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2 Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis 1,3 Dichloropropene	< 5	5.
Bromoform	< 5	5.
4 Methyl 2 Pentanone	< 25	25.
2 Hexanone	< 25	25.
1,1,2,2 Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	< 5	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylenes	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24512

GCMS 624 SURROGATE % RECOVERY

COMPOUND NAME	% RECOVERY	RANGE
S1 = 1,2-Dichloroethane-D4	108	76-114
S2 = Toluene-D8	94	88-110
S3 = 4-Bromofluorobenzene	96	86-115

Comments:

McLaren

VOLATILE ORGANICS
MODIFIED EPA METHOD 624

Project: CHIC-3.0 Lab ID: 24509

Sample Location: MW-2 Date Sampled: 04/25/89

Sample Number: 028501 Date Analyzed: 04/26/89

COMPOUND	ANALYTE CONCENTRATION ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 25	25.
Carbon Disulfide	< 5	5.
1,1 Dichloroethene	< 5	5.
1,1 Dichloroethane	< 5	5.
1,2 Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
1,2 Dichloroethane	< 5	5.
2 Butanone	< 25	25.
1,1,1 Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2 Dichloropropane	< 5	5.
Trans 1,3 Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2 Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis 1,3 Dichloropropene	< 5	5.
Bromoform	< 5	5.
4 Methyl 2 Pentanone	< 25	25.
2 Hexanone	< 25	25.
1,1,2,2 Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	< 5	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylenes	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24509

GCMS 624 SURROGATE % RECOVERY

COMPOUND NAME	% RECOVERY	RANGE
S1 = 1,2-Dichloroethane-D4	106	76-114
S2 = Toluene-D8	98	88-110
S3 = 4-Bromofluorobenzene	102	86-115

Comments:

McLaren

VOLATILE ORGANICS
MODIFIED EPA METHOD 624

Project: CHIC-3.0 Lab ID: 24510

Sample Location: MW-3 Date Sampled: 04/25/89

Sample Number: 028509 Date Analyzed: 04/27/89

COMPOUND	ANALYTE CONCENTRATION ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 25	25.
Carbon Disulfide	< 5	5.
1,1 Dichloroethene	< 5	5.
1,1 Dichloroethane	< 5	5.
1,2 Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
1,2 Dichloroethane	< 5	5.
2 Butanone	< 25	25.
1,1,1 Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2 Dichloropropane	< 5	5.
Trans 1,3 Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2 Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis 1,3 Dichloropropene	< 5	5.
Bromoform	< 5	5.
4 Methyl 2 Pentanone	< 25	25.
2 Hexanone	< 25	25.
1,1,2,2 Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	< 5	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylenes	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24510

GCMS 624 SURROGATE % RECOVERY

COMPOUND NAME	% RECOVERY	RANGE
S1 = 1,2-Dichloroethane-D4	93	76-114
S2 = Toluene-D8	101	88-110
S3 = 4-Bromofluorobenzene	103	86-115

Comments:

McLaren

VOLATILE ORGANICS
MODIFIED EPA METHOD 624

Project: CHIC-3.0 Lab ID: 24511

Sample Location: Trip Blank Date Sampled: 04/25/89

Sample Number: 028525 Date Analyzed: 04/26/89

COMPOUND	ANALYTE CONCENTRATION ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Chloromethane	< 10	10.
Bromomethane	< 10	10.
Vinyl Chloride	< 10	10.
Chloroethane	< 10	10.
Methylene Chloride	< 25	25.
Acetone	< 25	25.
Carbon Disulfide	< 5	5.
1,1 Dichloroethene	< 5	5.
1,1 Dichloroethane	< 5	5.
1,2 Dichloroethene(cis/trans)	< 5	5.
Chloroform	< 5	5.
1,2 Dichloroethane	< 5	5.
2 Butanone	< 25	25.
1,1,1 Trichloroethane	< 5	5.
Carbon Tetrachloride	< 5	5.
Bromodichloromethane	< 5	5.
1,2 Dichloropropane	< 5	5.
Trans 1,3 Dichloropropene	< 5	5.
Trichloroethene	< 5	5.
Benzene	< 5	5.
1,1,2 Trichloroethane	< 5	5.
Dibromochloromethane	< 5	5.
Cis 1,3 Dichloropropene	< 5	5.
Bromoform	< 5	5.
4 Methyl 2 Pentanone	< 25	25.
2 Hexanone	< 25	25.
1,1,2,2 Tetrachloroethane	< 5	5.
Tetrachloroethylene	< 10	10.
Toluene	< 5	5.
Chlorobenzene	< 5	5.
Ethyl Benzene	< 5	5.
Styrene	< 5	5.
Total Xylenes	< 5	5.

Analyst: K. Badal Reviewed By: R. L. James Date: 04/27/89

Laboratory Director: J. M. Bartell

McLaren

Lab ID: 24511

GCMS 624 SURROGATE % RECOVERY

COMPOUND NAME	% RECOVERY	RANGE
S1 = 1,2-Dichloroethane-D4	96	76-114
S2 = Toluene-D8	98	88-110
S3 = 4-Bromofluorobenzene	105	86-115

Comments:

McLaren

Duplicate Copy.

Site Assessment
5800 Christie Street
Emeryville, California
January 20, 1989

ROBERT E. GILS & ASSOCIATES

Environmental Health Consultants • Certified Industrial Hygienists
San Francisco • Dallas

Site Assessment
5800 Christie Street
Emeryville, California
January 20, 1989

The following report is the result of a soil survey program conducted by Robert Gils Associates Inc. (RGA) at the captioned location between October and December of 1988. Steve Croley of Croley and Herring Investment Company, provided all historical information regarding the site, past owners, past tenants and neighbors.

Executive Summary

The results of the survey conducted by RGA are summarized as follows:

1. Significant levels of organic solvents are found in the alley between the building and the adjacent property to the east. Solvent contamination extends to a depth of at least twelve feet. As the depth of groundwater at this site is twelve feet, one must assume that groundwater quality has been affected and that remedial actions will be necessary. The discovered solvents are: Carbon Tetrachloride, Ethyl Benzene, Toluene, 1,1,1-Trichloroethane, Trichloroethene and Xylenes.

2. The solvents discovered in the alley are most likely a result of spills associated with a cleaning tank located in the alley. Possible illegal disposal of solvents by unknown parties may have contribruted to the contamination.

3. Low levels of gasoline discovered at depths greater than ten feet suggest that an underground gasoline tank located in the adjacent property to the east has leaked gasoline onto the site.

Site Description

The site is a 0.82 acre property located on the southeast corner of Christie Street and Shellmound Avenue in Emeryville California (see Location Map). A one story, 22,800 square foot industrial warehouse is the only building located on the property. The building was constructed approximately twenty (20) years ago. Croley and Herring Investment Company purchased the property from Milligan Spika Company in 1980. Space in the building is leased to various tenants. All tenants have been evicted as of January 1989 to clear the building for a new lease. Concrete or asphalt slabs cover the entire site except for the alley to the east of the building and a thin border between the building and Christie and Powell Streets. These areas are unpaved.

The last tenants to occupy the building were Fisher Berkeley (a manufacturer of communication equipment for health care applications), Flexo Packaging (a manufacturer of printing plates for commercial packaging applications) and Data Plus (a computer software firm). These three tenants were evicted in late 1988/early 1989. Past tenants include Milligan-Spika (a distributor of auto parts), CRT (a computer and office machine repair business) and PRT (a distributor of phonograph records). Fisher Berkeley was an original tenant.

F.P. Lathrop Company owns the adjacent property to the east. In the past F.P. Lathrop Construction used the property as its corporate yard. Currently, a Sherwin-Williams wholesale paint store and the California Department of Health Services leases it.

A Mobil gas station is located to the west of the site on the opposite corner of Powell and Christie. A new shopping center called the Powell Street Plaza is located south of the site across Powell Street.

Geologic Setting

Four to six feet of mixed alluvial and fill material (generally poorly sorted silty sand with cobbles) overlays an unknown thickness of black organic bay mud.

Research conducted at the Regional Water Quality Control Board (RWQCB) indicates that the groundwater flow at nearby sites is generally south to south-west towards the San Francisco Bay. No groundwater flow data for this particular piece of property exists.

Groundwater was encountered in our borings at approximately twelve feet.

Methods and Sampling Strategy

Present tenant activities were examined to determine sites of probable soil contamination. The location of equipment, machinery and sites of obvious surface contamination (i.e., splatter marks) are areas with the potential for soil contamination and were therefore sampled.

An extendible hand auger, with a solid spoon coring device were used for the actual sampling for the shallow holes (less than four feet). For the deeper holes a mechanical rotary drill was used for the drilling and the samples were taken with the solid spoon coring device. Soil cores are two inches in diameter and six inches long and are contained in brass sleeves. The sleeves are capped at both ends with aluminum foil and plastic caps then wrapped with duct tape. Each core is assigned a unique number. Cores were stored in an ice chest in the field and a refrigerator in the office. A same day courier trasported the samples to the laboratory.

Fireman's Fund Insurance Companies Environmental Laboratory in Petaluma (the name has recently been changed to AccuLab) analyzed the samples. This lab is certified by the American Industrial Hygiene Association (AIHA #103) and by the

California Department of Health Services (DOHS) to analyze hazardous waste materials. EPA method 8240 was used for samples analyzed for solvents. EPA methods 5020/8015/8020 were used for samples analyzed for gasoline and BTEX.

Sample Results - Solvents

Complete laboratory results may be found at the end of this report.

Significant levels of organic solvents were found in the soil located in the narrow alley between the building and the property to the east. Solvents found in the soil are Carbon Tetrachloride, Ethyl Benzene, Toluene, 1,1,1-Trichloroethane, Trichloroethene and xylenes. The maximum concentration of these contaminants are as follows:

Carbon Tetrachloride	27 ppm
Ethyl Benzene	28 ppm
Toluene	2800 ppm
1,1,1-Trichloroethane	280 ppm
Trichloroethene	3600 ppm
Xylenes	42 ppm

These results are from a soil sample taken at a depth of 2' 6" east of the cleaning tank mounted on the exterior of the building in the unpaved alley (Hole 4-Sample 9653). The tank is approximately four feet long one foot wide and three feet deep. The cleaning tank is indicated on both the Site Plan, the Bore Hole Location Drawing and the Alley Sample Location Chart.

In the same location (Hole 2-Sample 9667) at a depth of twelve feet (the approximate depth of groundwater) the solvent concentrations are as follows:

Carbon Tetrachloride	11 ppm
Ethyl Benzene	<2.5 ppm
Toluene	56 ppm
1,1,1-trichloroethane	69 ppm
Trichloroethene	93 ppm
Xylenes	<2.5 ppm

These levels of solvent are found at groundwater depth. Furthermore the water in the bottom of the borehole is shiny and smells of solvent. A sample (Sample 9668) taken at a depth of six feet in the same area shows solvent levels between the levels found in the above two samples.

Fifteen feet to the south, (Hole 1) samples were taken at three feet (Sample 9665) and five feet (Sample 9666). At five feet the drill bit was refused (probably a buried piece of concrete or steel). The solvent levels at three feet are:

Carbon Tetrachloride	23 ppm
Ethyl Benzene	3 ppm
Toluene	1400 ppm
1,1,1-Trichloroethane	190 ppm
Trichloroethene	960 ppm
Xylenes	8.4 ppm

At this distance from the cleaning tank, the solvent levels fall off quickly with depth. For example at a depth of five feet in the same borehole the solvent levels are:

Carbon Tetrachloride	<2.5 ppm
Ethyl Benzene	<2.5 ppm
Toluene	26 ppm
1,1,1-Trichloroethane	3.7 ppm
Trichloroethene	19 ppm
Xylenes	<2.5 ppm

The last location of concern with regards to solvents is Hole 3. Sample 9669 is at a depth of five feet six inches and sample 9670 is at a depth of twelve feet. Carbon Tetrachloride and Ethyl Benzene are less than detectable in both of these samples (detection limits of 2.5 ppm for sample 9669 and 0.25 ppm for sample 9670). Toluene is found at 33 ppm in sample 9669 and 0.81 ppm in sample 9670. 1,1,1-Trichloroethane is found at 7.3 ppm in sample 9669 and 0.49 ppm in sample 9670. Trichloroethene follows a similar pattern (88 ppm in sample 9669 and 2.9 ppm in sample 9670). Xylenes were not detected (same detection limits as for Carbon Tetrachloride and Ethyl Benzene).

Finally, the samples taken from boreholes inside the building showed less than detectable levels or, at the most, concentrations in the low parts per billion range (again, see the laboratory reports for details).

Discussion - Solvents

At least some of the solvent contamination is due to spills from around the cleaning tank. Evidence includes the far greater depth of penetration near the tank (Hole 2) as compared with the depth of penetration in Hole 3 and Hole 1. This indicates that a greater volume of material has been spilled near the tank than the other areas. Also, if the anticipated groundwater gradient (south to southwest) is correct, we would expect to find significantly lower solvent concentrations directly north of the spill point. The results from Hole 3 confirm this.

Splash marks on the wall in the alley and the shallow nature of the contamination south of the cleaning tank, indicate that dumping by unknown parties has probably contributed to the contamination. Solvent contamination a distance from

the cleaning tank entirely due to spills near the tank would exhibit concentrations increasing with depth because of the tongue-like nature of point source plumes. This is the opposite of the pattern found in the alley (contamination decreases with depth). We expect that the concentration of shallow solvent contamination will continue to decrease as one moves south in the alley because the access to the alley is from the north and materials seem to be dumped near the entrance. The lateral extent of shallow contamination is unknown.

To summarize, we believe that the bulk of the solvent contamination found in the soil is due to spills related with the cleaning tank. Coupled with the contamination caused by the cleaning tank activities a component of the plume may be due to solvent disposal in the alley by unknown parties.

Sample Results - Gasoline

A gasoline pump is located on the F.P. Lathrop Company property to the east of the site. The gas pump is shown on the Site Plan and on the Bore Hole Location Map. It is unknown if the underground tank associated with the pump has ever been registered or whether or not it is still in place. The pump does not appear to be in service at this time. The location of the tank as drawn on the Site Plan and Bore Hole Location Map is inferred from surface evidence. This evidence includes the location of the vent and filler holes and the appearance of the slab.

Two holes (Holes 13 and 14) were drilled on the Croley and Herring Investment Company side of the property line as close to the assumed location of the tank as possible in order to assess the possibility of a leak. Samples from these holes were tested for Total Fuel Hydrocarbons + BTX (EPA Method 5020/8015/8020) Additionally, the twelve foot depth samples (Samples 9667 and 9670) from Hole 2 and Hole 3 were tested for Total Fuel Hydrocarbons.

The sample results are as follows (the holes are in order of north to south):

Hole #	Sample#	Depth	Results
13	9663	6'	None Detected
13	9664	11'	Gasoline 3.2 ppm
14	9662	11'	Gasoline 5.4 ppm Xylene 0.057 ppm
3	9670	12'	Gasoline 1.4 ppm
2	9667	12'	Gasoline 35 ppm

Discussion - Gasoline

The concentration of gasoline found on the Croley and Herring property is less than 100 ppm, but there is still detectable gasoline present. With the absence of evidence of other tanks in the area we have to assume that the plume is

emanating from the tank on the F.P Lathrop property. We do not believe that gasoline found in the soil on the Croley and Herring property is the result of a spill or surface dumping because the gasoline concentration increases with depth and is generally not detectable near the surface.

Without sampling on the F.P. Lathrop property the extent of contamination cannot be assessed nor can the source of the gasoline be proven.

Conclusion

Significant levels of solvent contamination were found in the alley between the warehouse building and the adjacent property to the east. The levels are high enough at twelve feet (the groundwater depth on this property) to insure that the groundwater has been impacted.

The solvent contamination is probably due to a combination of activities related to the cleaning tank on the northeast corner of the building and dumping of solvents into the alley itself.

Evidence suggests that the gasoline tank located on the F.P. Lathrop property (the property adjacent to the east) is leaking (or has leaked) gasoline into the soil and onto the Croley and Herring property.

The industrial history of the area will complicate the cleanup of the site. Overlapping plumes from several sources over a long period of time will make it difficult to determine whose responsibility stops where. Also, unless a cleanup on the site is accompanied by cleanups on adjacent properties, any gains made in soil and ground water quality will possibly be lost due to migration of plumes from other areas.

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To summarize, we believe that the bulk of the solvent contamination found in the soil is due to spills related with the cleaning tank. Coupled with the contamination caused by the cleaning tank activities a component of the plume may be due to solvent disposal in the alley by unknown parties.

Sample Results - Gasoline

A gasoline pump is located on the F.P. Lathrop Company property to the east of the site. The gas pump is shown on the Site Plan and on the Bore Hole Location Map. It is unknown if the underground tank associated with the pump has ever been registered or whether or not it is still in place. The pump does not appear to be in service at this time. The location of the tank as drawn on the Site Plan and Bore Hole Location Map is inferred from surface evidence. This evidence includes the location of the vent and filler holes and the appearance of the slab.

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The sample results are as follows (the holes are in order of north to south):

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The concentration of gasoline found on the Croley and Herring property is less than 100 ppm, but there is still detectable gasoline present. With the absence of evidence of other tanks in the area we have to assume that the plume is

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Without sampling on the F.P. Lathrop property the extent of contamination cannot be assessed nor can the source of the gasoline be proven.

Conclusion

Significant levels of solvent contamination were found in the alley between the warehouse building and the adjacent property to the east. The levels are high enough at twelve feet (the groundwater depth on this property) to insure that the groundwater has been impacted.

The solvent contamination is probably due to a combination of activities related to the cleaning tank on the northeast corner of the building and dumping of solvents into the alley itself.

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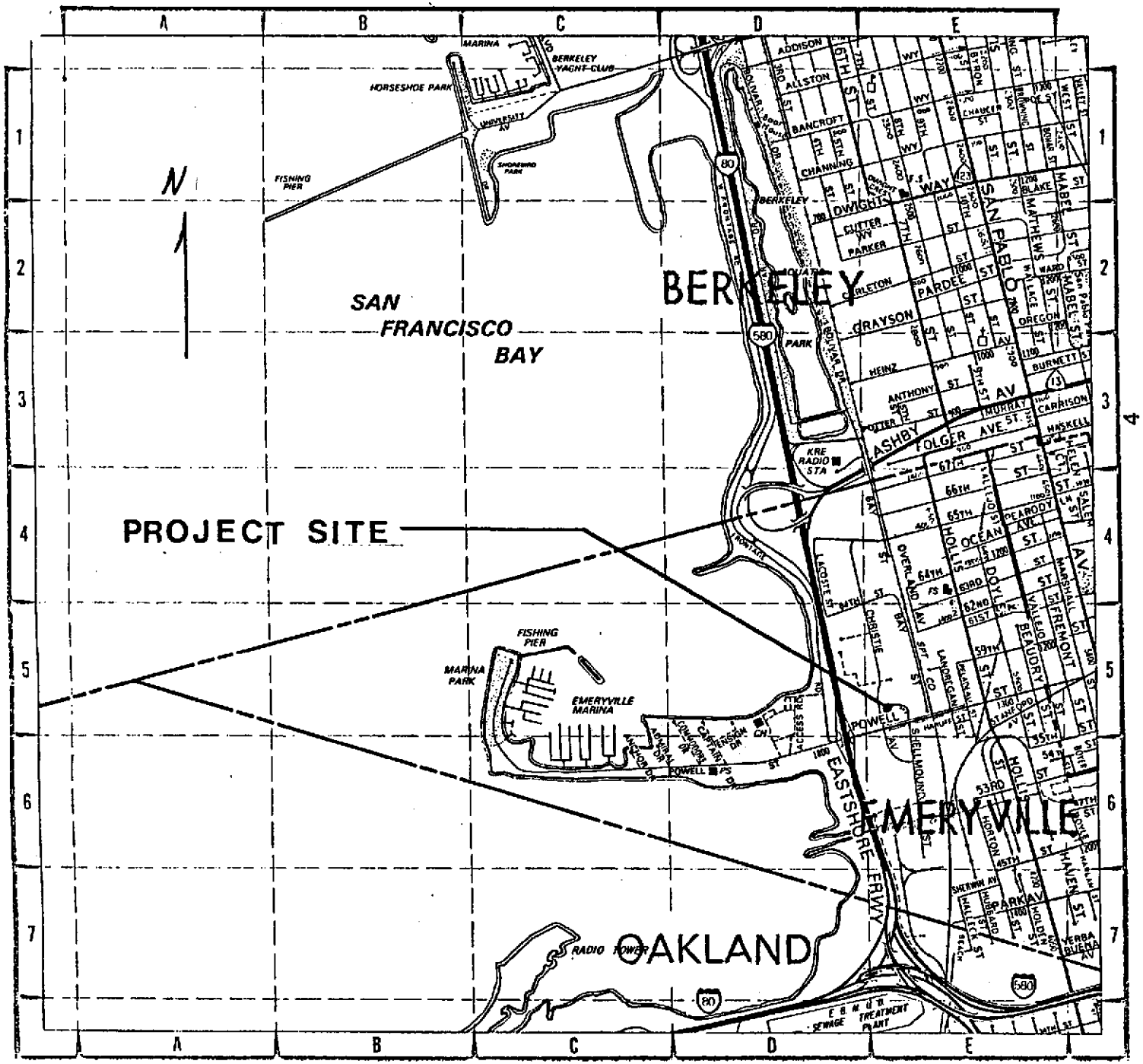
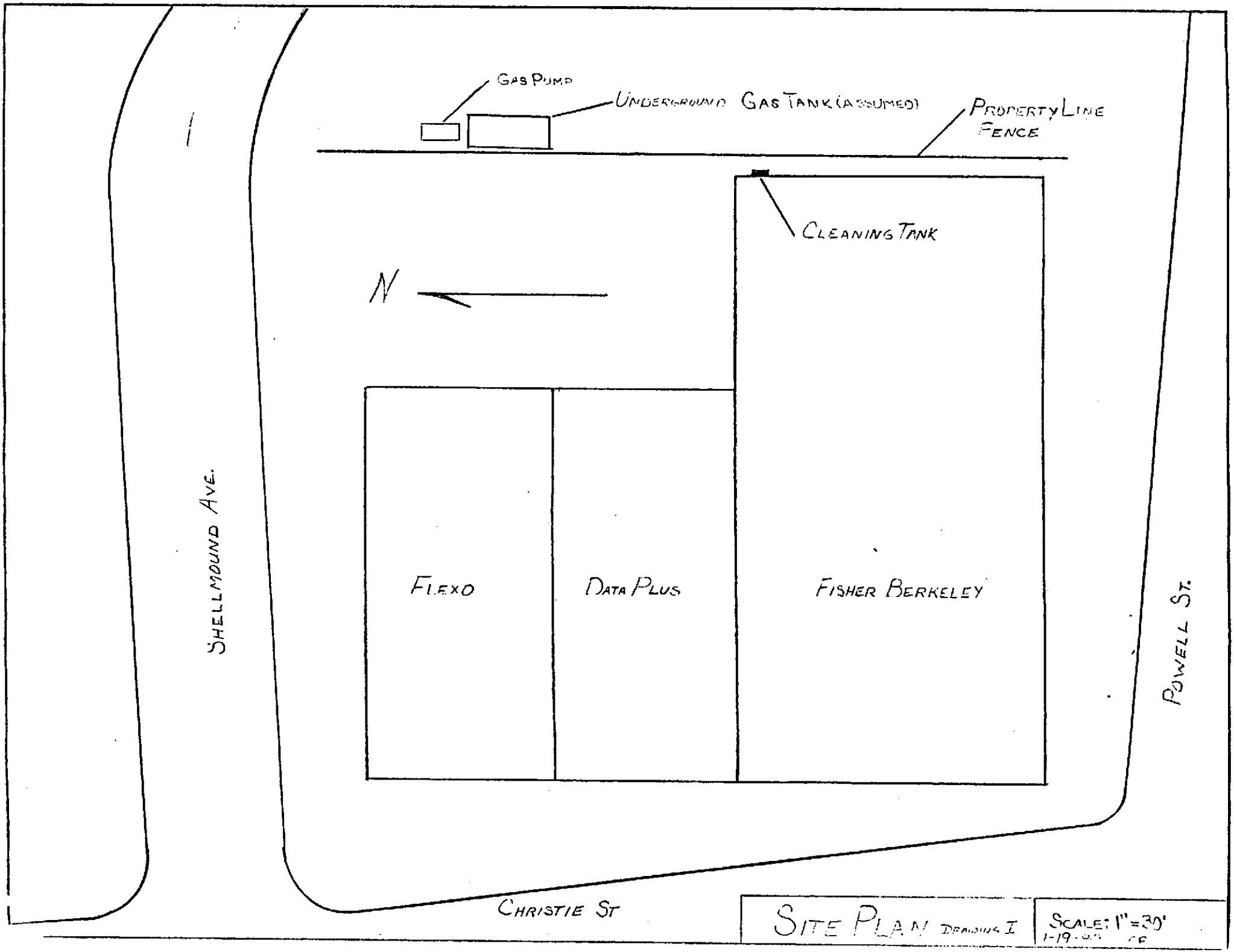


LOCATION MAP

SCALE: 1" = 2200'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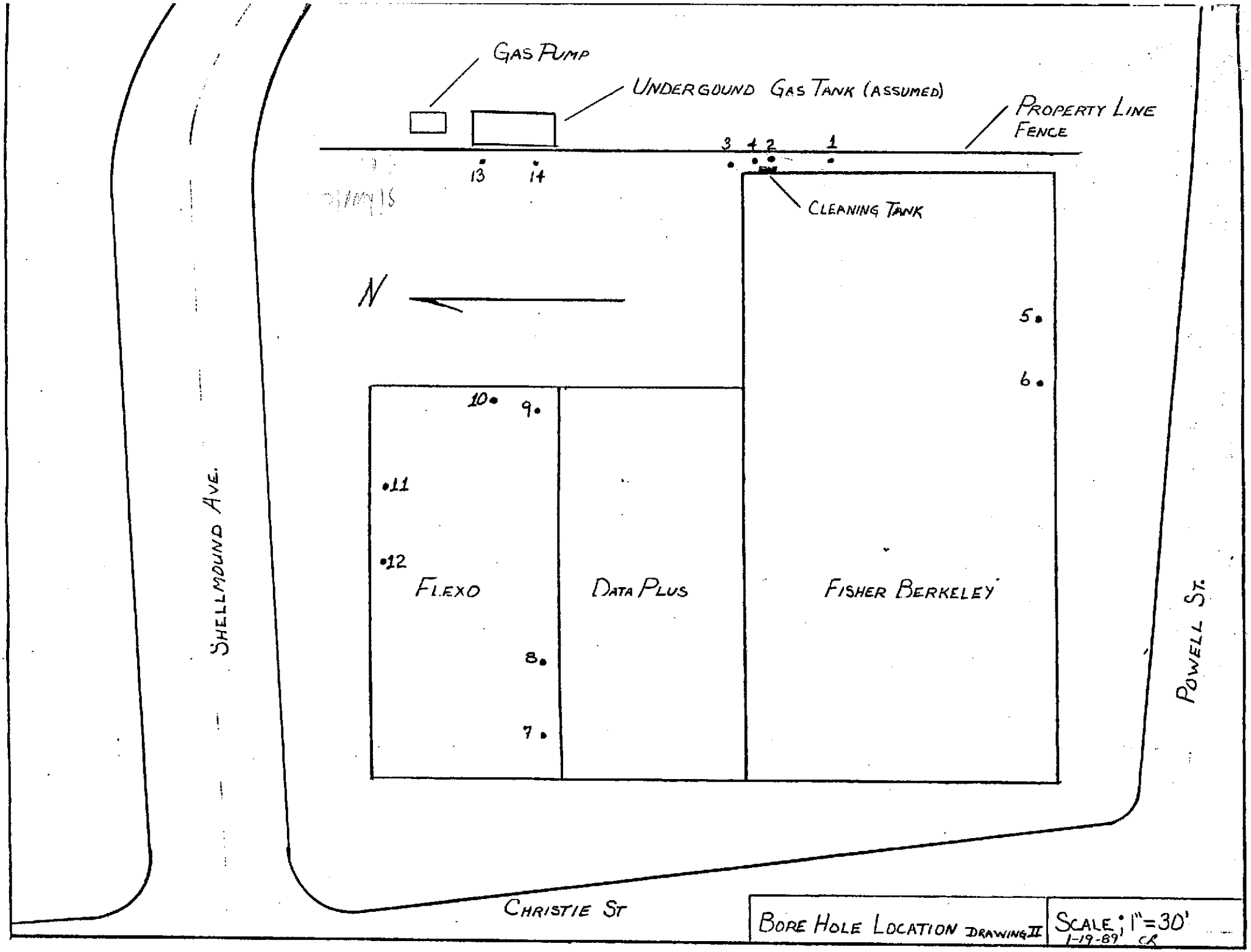
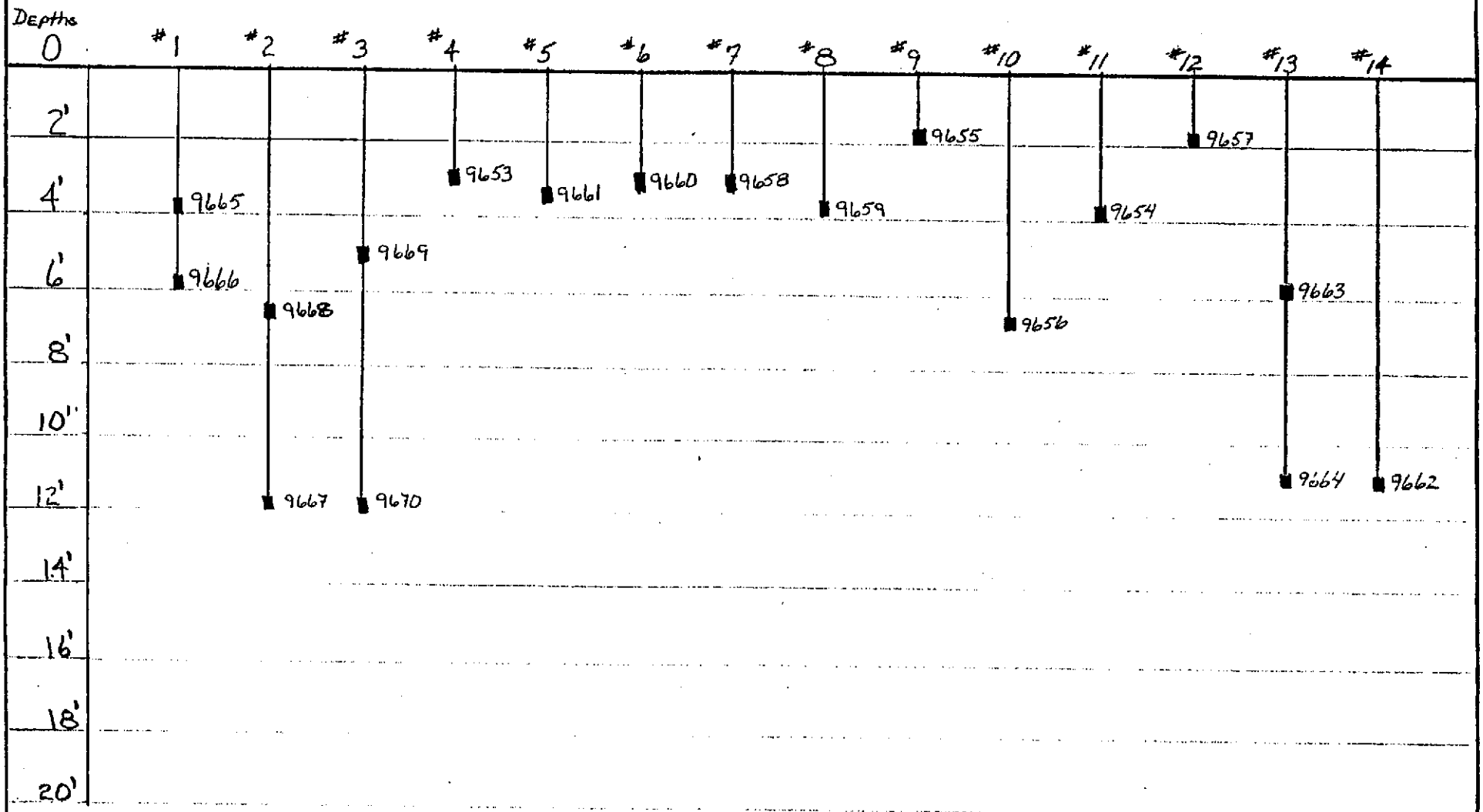
UNDERGROUND GAS TANK (ASSUMED)
PROPERTY LINE
FENCE
CLEANING TANK
N
FLEXO
DATA PLUS
FISHER BERKELEY
SHELLMOUND AVE.
POWELL ST.
CHRISTIE ST
SITE PLAN DRAWING I
SCALE: 1" = 30'
1-19-

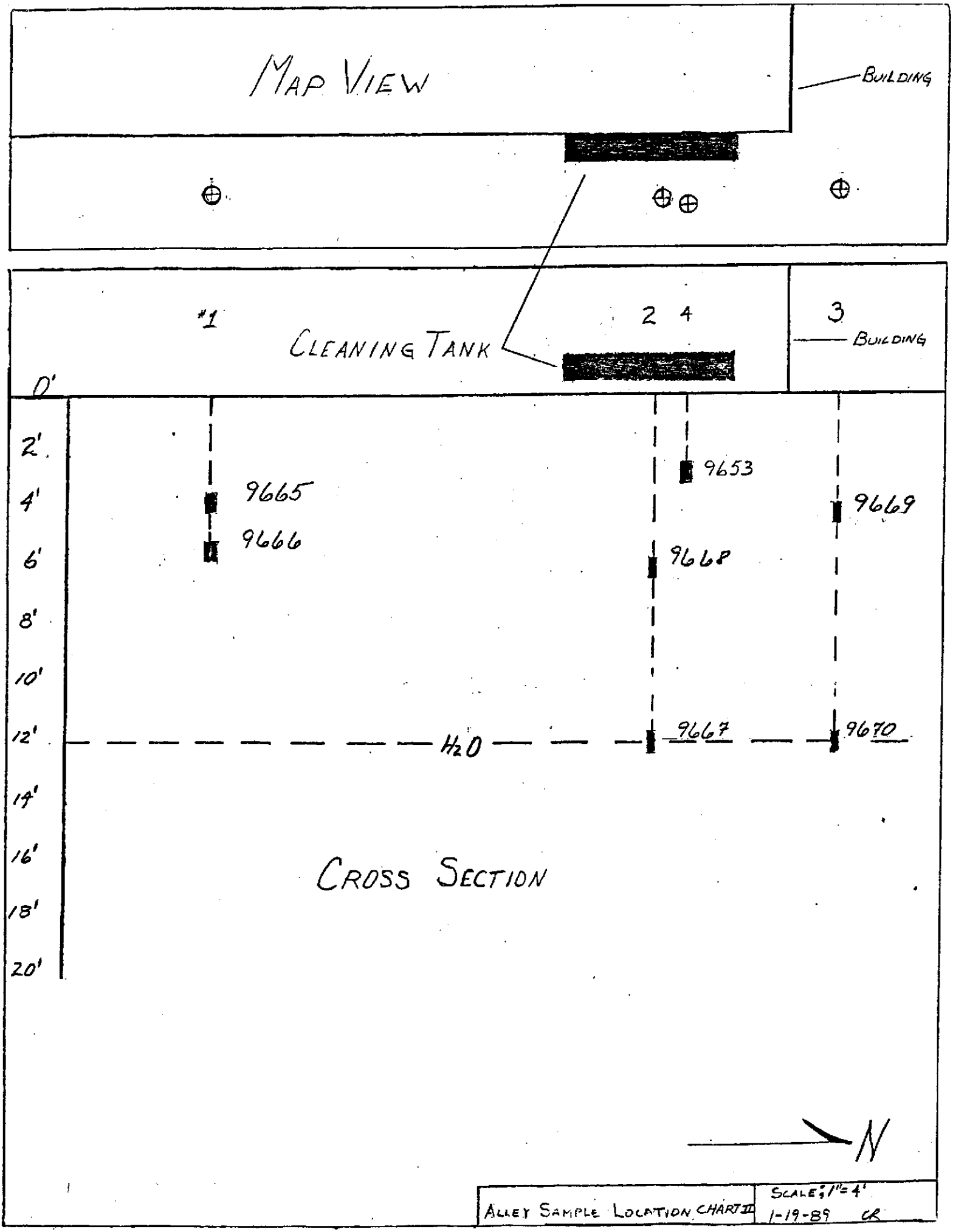

GAS PUMP
UNDERGOUND GAS TANK (ASSUMED)
PROPERTY LINE FENCE
3
4
2
1
13
14
CLEANING TANK
N
5
6
10
9
11
12
8
7
FLEXO
DATA PLUS
FISHER BERKELEY
SHELLMOUND AVE.
POWELL ST.
CHRISTIE ST
BORE HOLE LOCATION DRAWING II
SCALE: 1"=30'
1-19-89 CR

Bore Hole Numbers



NOTES;
1) Hole Numbers 1-3 and 13-14 were drilled with a Mechanical Rotary Drill.
2) Hole Numbers 4-12 were Drilled with a Hand Auger.
3) See Drawing II for Bore Hole Locations.

Schematic of Sample Depths Chart I	Vertical Scale 1" = 4' 1-19-89 CR


MAP VIEW
BUILDING
#1
CLEANING TANK
2 4
3
BUILDING
0'
2'
4'
6'
8'
10'
12'
14'
16'
18'
20'
9665
9666
9653
9668
9669
H2O
9667
9670
CROSS SECTION
N
ALLEY SAMPLE LOCATION CHART II
SCALE: 1"=4'
1-19-89 CR

Summary of Soil Sample Results

All organic solvent sample by EPA 8240.
Gasoline + BTEX samples were by EPA 5020/8015/8020
Only detected compounds are reported here. See laboratory reports for detection limits and non-detected compounds.

Units: mg/kg (ppm)
ug/kg (ppb)

Hole	Sample	Depth	Results
1	9665	4'	Carbon Tetrachloride 23 ppm Ethyl Benzene 3.0 ppm Toluene 1400 ppm 1,1,1-Trichloroethane 190 ppm Trichloroethene 960 ppm Xylenes 8.4 ppm
	9666	6'	Toluene 26 ppm 1,1,1-Trichloroethane 3.7 ppm Trichloroethene 19 ppm
2	9668	7'	Carbon Tetrachloride 12 ppm 1,1-Dichloroethane 4.2 ppm Toluene 87 ppm 1,1,1-Trichloroethane 76 ppm Trichloroethene 160 ppm
	9667	12'	Carbon Tetrachloride 11 ppm Toluene 56 ppm 1,1,1-Trichloroethane 69 ppm Trichloroethene 93 ppm Gasoline 35 ppm
3	9669	5'	Toluene 33 ppm 1,1,1-Trichloroethane 7.3 ppm Trichloroethene 88 ppm
	9670	12'	Toluene 0.81 ppm 1,1,1-Trichloroethane 0.49 ppm Trichloroethene 2.9 ppm Gasoline 1.4 ppm
4	9653	2'5"	Carbon Tetrachloride 27 ppm Ethyl Benzene 28 ppm Toluene 2800 ppm 1,1,1-Trichloroethane 280 ppm Trichloroethene 3600 ppm
5	9661	3'5"	None Detected

6	9660	3'	1,1-Dichloroethane 7.6 ppb Tetrachloroethene 34 ppb Toluene 6.0 ppb 1,1,1-Trichloroethane 77 ppb Trichloroethene 140 ppb Xylenes 4.9 ppb
7	9658	3'	None Detected
8	9659	3'4"	None Detected
9	9655	2'	Tetrachloroethene 12 ppb Toluene 3.2 ppb Trichloroethene 12 ppb
10	9656	6'3"	Toluene 4.0 ppb 1,1,1-Trichloroethane 3.6 ppb Trichloroethene 9.1 ppb
11	9654	4'	Toluene 5.5 ppb Trichloroethene 8.6 ppb
12	9657	2'	Toluene 2.8 ppb Trichloroethene 7.8 ppb
13	9663	6'	None Detected
	9664	11'	Gasoline 3.2 ppm
14	9662	11'	Gasoline 5.4 ppm Xylene 0.057ppm

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Jackie Daly
Robert Gils Associates Inc.
6400 Hollis Street, Suite 3
Emeryville, CA 94608

Client Code: GILS4
Survey # JC:CH 1882

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 884861
Date Received: 10/12/88
Date Reported: 10/27/88

Date Analyzed: 10/21/88

PURGEABLES BY GC/MS(EPA8240)

COMPOUNDS:	LAB#	67101	DET.	67102	DET.	67103	DET.
	SMP#	9653	LIM.	9654	LIM.	9655	LIM.
PURGEABLES		UG/GM		UG/KG		UG/KG	
BENZENE		ND	25.0	ND	2.5	ND	2.5
BROMODICHLOROMETHANE		ND	25.0	ND	2.5	ND	2.5
BROMOFORM		ND	25.0	ND	2.5	ND	2.5
BROMOMETHANE		ND	25.0	ND	2.5	ND	2.5
CARBON TETRACHLORIDE		27	25.0	ND	2.5	ND	2.5
CHLOROBENZENE		ND	25.0	ND	2.5	ND	2.5
CHLOROETHANE		ND	25.0	ND	2.5	ND	2.5
2-CHLOROETHYLVINYL ETHER		ND	50.0	ND	5.0	ND	5.0
CHLOROFORM		ND	25.0	ND	2.5	ND	2.5
CHLOROMETHANE		ND	25.0	ND	2.5	ND	2.5
DIBROMOCHLOROMETHANE		ND	25.0	ND	2.5	ND	2.5
1,2-DICHLOROBENZENE		ND	25.0	ND	2.5	ND	2.5
1,3-DICHLOROBENZENE		ND	25.0	ND	2.5	ND	2.5
1,4-DICHLOROBENZENE		ND	25.0	ND	2.5	ND	2.5
1,1-DICHLOROETHANE		ND	25.0	ND	2.5	ND	2.5
1,2-DICHLOROETHANE		ND	25.0	ND	2.5	ND	2.5
1,1-DICHLOROETHENE		ND	25.0	ND	2.5	ND	2.5
TRANS-1,2-DICHLOROETHENE		ND	25.0	ND	2.5	ND	2.5
1,2-DICHLOROPROPANE		ND	25.0	ND	2.5	ND	2.5
CIS-1,3-DICHLOROPROPENE		ND	25.0	ND	2.5	ND	2.5
TRANS-1,3-DICHLOROPROPENE		ND	25.0	ND	2.5	ND	2.5
ETHYL BENZENE		28	25.0	ND	2.5	ND	2.5
METHYLENE CHLORIDE		ND	25.0	ND	2.5	ND	2.5
		DUPLICATE					

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 884861

COMPOUNDS:	LAB#	67101	DET.	67102	DET.	67103	DET.
	SMP#	9653	LIM.	9654	LIM.	9655	LIM.
PURGEABLES		UG/GM		UG/KG		UG/KG	
1,1,2,2-TETRACHLOROETHANE		ND	25.0	ND	2.5	ND	2.5
TETRACHLOROETHENE		ND	25.0	ND	2.5	12	2.5
TOLUENE		2800	25.0	5.5	2.5	3.2	2.5
1,1,1-TRICHLOROETHANE		280	25.0	ND	2.5	ND	2.5
1,1,2-TRICHLOROETHANE		ND	25.0	ND	2.5	ND	2.5
TRICHLOROETHENE		3600	25.0	8.6	2.5	12	2.5
TRICHLOROFLUOROMETHANE		ND	25.0	ND	2.5	ND	2.5
VINYL CHLORIDE		ND	50.0	ND	5.0	ND	5.0
XYLENES		42	25.0	ND	2.5	ND	2.5
				DUPLICATE			

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Laboratory Job No.: 884861

COMPOUNDS:	LAB#	67104	DET.	67105	DET.	67106	DET.
	SMP#	9656	LIM.	9657	LIM.	9658	LIM.
PURGEABLES		UG/KG		UG/KG		UG/KG	
BENZENE		ND	2.5	ND	2.5	ND	2.5
BROMODICHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
BROMOFORM		ND	2.5	ND	2.5	ND	2.5
BROMOMETHANE		ND	2.5	ND	2.5	ND	2.5
CARBON TETRACHLORIDE		ND	2.5	ND	2.5	ND	2.5
CHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
CHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
2-CHLOROETHYLVINYL ETHER		ND	5.0	ND	5.0	ND	5.0
CHLOROFORM		ND	2.5	ND	2.5	ND	2.5
CHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
DIBROMOCHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,3-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,4-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
TRANS-1,2-DICHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROPROPANE		ND	2.5	ND	2.5	ND	2.5
CIS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	2.5
TRANS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	2.5
ETHYL BENZENE		ND	2.5	ND	2.5	ND	2.5
METHYLENE CHLORIDE		ND	2.5	ND	2.5	ND	2.5
1,1,2,2-TETRACHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TETRACHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
TOLUENE		4.0	2.5	2.8	2.5	ND	2.5
1,1,1-TRICHLOROETHANE		3.6	2.5	ND	2.5	ND	2.5
1,1,2-TRICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TRICHLOROETHENE		9.1	2.5	7.8	2.5	ND	2.5
TRICHLOROFLUOROMETHANE		ND	2.5	ND	2.5	ND	2.5
VINYL CHLORIDE		ND	5.0	ND	5.0	ND	5.0
XYLENES		ND	2.5	ND	2.5	ND	2.5
				DUPLICATE			

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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 884861

COMPOUNDS:	LAB#	67107	DET.	67108	DET.	67109	DET.
	SMP#	9659	LIM.	9660	LIM.	9661	LIM.
	dil.	1		1		1	
PURGEABLES		UG/KG		UG/KG		UG/KG	
BENZENE		ND	2.5	ND	2.5	ND	2.5
BROMODICHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
BROMOFORM		ND	2.5	ND	2.5	ND	2.5
BROMOMETHANE		ND	2.5	ND	2.5	ND	2.5
CARBON TETRACHLORIDE		ND	2.5	ND	2.5	ND	2.5
CHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
CHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
2-CHLOROETHYLVINYL ETHER		ND	5.0	ND	5.0	ND	5.0
CHLOROFORM		ND	2.5	ND	2.5	ND	2.5
CHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
DIBROMOCHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,3-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,4-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHANE		ND	2.5	7.6	2.5	ND	2.5
1,2-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
TRANS-1,2-DICHLOROETHENE		ND	2.5	59	2.5	ND	2.5
1,2-DICHLOROPROPANE		ND	2.5	ND	2.5	ND	2.5
CIS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	2.5
TRANS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	2.5
ETHYL BENZENE		ND	2.5	ND	2.5	ND	2.5
METHYLENE CHLORIDE		ND	2.5	ND	2.5	ND	2.5
1,1,2,2-TETRACHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TETRACHLOROETHENE		ND	2.5	34	2.5	ND	2.5
TOLUENE		ND	2.5	6.0	2.5	ND	2.5
1,1,1-TRICHLOROETHANE		ND	2.5	77	2.5	ND	2.5
1,1,2-TRICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TRICHLOROETHENE		ND	2.5	140	2.5	ND	2.5
TRICHLOROFLUOROMETHANE		ND	2.5	ND	2.5	ND	2.5
VINYL CHLORIDE		ND	5.0	ND	5.0	ND	5.0
XYLENES		ND	2.5	4.9	2.5	ND	2.5
				DUPLICATE			

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ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 884861

COMPOUNDS:	LAB#	67107	DET.	67108	DET.	67109	DET.
	SMP#	9659	LIM.	9660	LIM.	9661	LIM.
	dil.	1		1		1	
PURGEABLES		UG/KG		UG/KG		UG/KG	

ND: NOT DETECTED

NOTE: SAMPLE 9653 (LAB NUMBER 67101) IS REPORTED IN UG/GM (PPM). ALL OTHER SAMPLES ARE REPORTED IN UG/KG (PPB).

ANALYST:PAUL MILLS

DUPLICATE

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ENVIRONMENTAL LABORATORY

Jackie Daly
Robert Gils Associates Inc.
6400 Hollis Street, Suite 3
Emeryville, CA 94608

Client Code: GILS4
Survey # CHI-883

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 885141
Date Extracted: 11/01/88
Date Analyzed: 11/02/88
Date Received: 10/27/88
Date Reported: 11/09/88

ASSAY:TPH/GASOLINE & BTEX EPA 5020/8015/8020
MATRIX:SOIL

LABNO SMPLNO-ID	RESULTS	DET.LIM
78595 9662 GASOLINE	5.4 mg/kg	1.2 mg/kg
78596 9663 GASOLINE	ND	1.2 mg/kg
78597 9664 GASOLINE	3.2 mg/kg #	1.2 mg/kg

#=Detected below accurate method quantitation limit(below 3.3-det.lim.).
ANALYST:ROBERT REMLINGER

THIS REPORT HAS BEEN REVIEWED
AND APPROVED FOR RELEASE.

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ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 885141
Date Extracted: 11/01/88
Date Analyzed: 11/02/88
Date Received: 10/27/88
Date Reported: 11/09/88

MATRIX:SOIL

LABNO SMPLNO-ID	RESULTS	DET.LIM
78595 9662		
BENZENE	ND	0.04 mg/kg
TOLUENE	ND	0.04 mg/kg
ETHYLBENZENE	ND	0.04 mg/kg
XYLENE	0.057 mg/kg #	0.04 mg/kg
78596 9663		
BENZENE	ND	0.04 mg/kg
TOLUENE	ND	0.04 mg/kg
ETHYLBENZENE	ND	0.04 mg/kg
XYLENE	ND	0.04 mg/kg
78597 9664		
BENZENE	ND	0.04 mg/kg
TOLUENE	ND	0.04 mg/kg
ETHYLBENZENE	ND	0.04 mg/kg
XYLENE	ND	0.04 mg/kg

#=Detected below accurate method quantitation limit(below 3.3-det.lim.).
ANALYST:ROBERT REMLINGER

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Petaluma, CA 94952
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ENVIRONMENTAL LABORATORY

Rich Halket
Robert Gils Associates Inc.
6400 Hollis Street, Suite 3
Emeryville, CA 94608

Client Code: GILS5
Survey # CHI-884

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 885953
Date Extracted: 01/11/89
Date Received: 12/28/88
Date Analyzed: 01/12/89
Date Reported: 01/12/89

ASSAY:TPH/GASOLINE (EPA 5020/8015)
MATRIX:SOIL

LABNO SMPLNO-ID	RESULTS	DET.LIM
83378 9667 GASOLINE	35 mg/kg	5.7 mg/kg
83381 9670 GASOLINE	1.4 mg/kg #	1.2 mg/kg

NOTE:TCE DETECTED IN 83378.
#=Detected below accurate method quantitation limit(below 3.3-det.lim.).
ANALYST:ROBERT REMLINGER

THIS REPORT HAS BEEN REVIEWED
AND APPROVED FOR RELEASE.

FIREMAN'S FUND
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ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 885953
Date Extracted: 12/28/88
Date Received: 12/28/88
Date Analyzed: 12/29/88
Date Reported: 01/12/89

PURGEABLES BY GC/MS(EPA8240)

COMPOUNDS:	LAB#	83376	DET.	83377	DET.	83378	DET.
	SMP#	9665	LIM.	9666	LIM.	9667	LIM.
	dil.	1000		1000		1000	
PURGEABLES		MG/KG		MG/KG		MG/KG	
BENZENE		ND	2.5	ND	2.5	ND	2.5
BROMODICHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
BROMOFORM		ND	2.5	ND	2.5	ND	2.5
BROMOMETHANE		ND	2.5	ND	2.5	ND	2.5
CARBON TETRACHLORIDE		23	2.5	ND	2.5	11	2.5
CHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
CHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
2-CHLOROETHYLVINYL ETHER		ND	5.0	ND	5.0	ND	5.0
CHLOROFORM		ND	2.5	ND	2.5	ND	2.5
CHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
DIBROMOCHLOROMETHANE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,3-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,4-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
1,1-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TRANS-1,2-DICHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
1,2-DICHLOROPROPANE		ND	2.5	ND	2.5	ND	2.5
CIS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	2.5
TRANS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	2.5
ETHYL BENZENE		3.0	2.5	ND	2.5	ND	2.5
METHYLENE CHLORIDE		ND	2.5	ND	2.5	ND	2.5
1,1,2,2-TETRACHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TETRACHLOROETHENE		ND	2.5	ND	2.5	ND	2.5
TOLUENE		1400*	2.5	26	2.5	56	2.5

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ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 885953

COMPOUNDS:	LAB#	83376	DET.	83377	DET.	83378	DET.
	SMP#	9665	LIM.	9666	LIM.	9667	LIM.
	dil.	1000		1000		1000	
PURGEABLES		MG/KG		MG/KG		MG/KG	
1,1,1-TRICHLOROETHANE		190*	2.5	3.7	2.5	69	2.5
1,1,2-TRICHLOROETHANE		ND	2.5	ND	2.5	ND	2.5
TRICHLOROETHENE		960*	2.5	19	2.5	93	2.5
TRICHLOROFLUOROMETHANE		ND	2.5	ND	2.5	ND	2.5
VINYL CHLORIDE		ND	5.0	ND	5.0	ND	5.0
XYLENES		8.4	2.5	ND	2.5	ND	2.5
ACETONE		ND	5.0	ND	5.0	ND	5.0
2-BUTANONE		ND	5.0	ND	5.0	ND	5.0
CARBON DISULFIDE		ND	5.0	ND	5.0	ND	5.0
2-HEXANONE		ND	5.0	ND	5.0	ND	5.0
4-METHYL-2-PENTANONE		ND	5.0	ND	5.0	ND	5.0
STYRENE		ND	5.0	ND	5.0	ND	5.0
VINYL ACETATE		ND	5.0	ND	5.0	ND	5.0

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ENVIRONMENTAL LABORATORY

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 885953

COMPOUNDS:	LAB#	83379	DET.	83380	DET.	83381	DET.
	SMP#	9668	LIM.	9669	LIM.	9670	LIM.
	dil.	1000		1000		100	
PURGEABLES		MG/KG		MG/KG		MG/KG	
BENZENE		ND	2.5	ND	2.5	ND	0.25
BROMODICHLOROMETHANE		ND	2.5	ND	2.5	ND	0.25
BROMOFORM		ND	2.5	ND	2.5	ND	0.25
BROMOMETHANE		ND	2.5	ND	2.5	ND	0.25
CARBON TETRACHLORIDE		12	2.5	ND	2.5	ND	0.25
CHLOROBENZENE		ND	2.5	ND	2.5	ND	0.25
CHLOROETHANE		ND	2.5	ND	2.5	ND	0.25
2-CHLOROETHYLVINYL ETHER		ND	5.0	ND	5.0	ND	0.5
CHLOROFORM		ND	2.5	ND	2.5	ND	0.25
CHLOROMETHANE		ND	2.5	ND	2.5	ND	0.25
DIBROMOCHLOROMETHANE		ND	2.5	ND	2.5	ND	0.25
1,2-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	0.25
1,3-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	0.25
1,4-DICHLOROBENZENE		ND	2.5	ND	2.5	ND	0.25
1,1-DICHLOROETHANE		4.2	2.5	ND	2.5	ND	0.25
1,2-DICHLOROETHANE		ND	2.5	ND	2.5	ND	0.25
1,1-DICHLOROETHENE		ND	2.5	ND	2.5	ND	0.25
1,1-DICHLOROETHANE		ND	2.5	ND	2.5	ND	0.25
1,2-DICHLOROETHANE		ND	2.5	ND	2.5	ND	0.25
TRANS-1,2-DICHLOROETHENE		ND	2.5	ND	2.5	ND	0.25
1,2-DICHLOROPROPANE		ND	2.5	ND	2.5	ND	0.25
CIS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	0.25
TRANS-1,3-DICHLOROPROPENE		ND	2.5	ND	2.5	ND	0.25
ETHYL BENZENE		ND	2.5	ND	2.5	ND	0.25
METHYLENE CHLORIDE		ND	2.5	ND	2.5	ND	0.25
1,1,2,2-TETRACHLOROETHANE		ND	2.5	ND	2.5	ND	0.25
TETRACHLOROETHENE		ND	2.5	ND	2.5	ND	0.25
TOLUENE		87 **	2.5	33	2.5	0.81	0.25
1,1,1-TRICHLOROETHANE		76	2.5	7.3	2.5	0.49	0.25
1,1,2-TRICHLOROETHANE		ND	2.5	ND	2.5	ND	0.25
TRICHLOROETHENE		160**	2.5	88	2.5	2.9	0.25
TRICHLOROFLUOROMETHANE		ND	2.5	ND	2.5	ND	0.25
VINYL CHLORIDE		ND	5.0	ND	5.0	ND	0.5

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ENVIRONMENTAL LABORATORY

LABORATORY RESULTS

Laboratory Job No.: 885953

COMPOUNDS:	LAB#	83379	DET.	83380	DET.	83381	DET.
	SMP#	9668	LIM.	9669	LIM.	9670	LIM.
	dil.	1000		1000		100	
PURGEABLES		MG/KG		MG/KG		MG/KG	
XYLENES		ND	2.5	ND	2.5	ND	0.25
ACETONE		ND	5.0	ND	5.0	ND	0.5
2-BUTANONE		ND	5.0	ND	5.0	ND	0.5
CARBON DISULFIDE		ND	5.0	ND	5.0	ND	0.5
2-HEXANONE		ND	5.0	ND	5.0	ND	0.5
4-METHYL-2-PENTANONE		ND	5.0	ND	5.0	ND	0.5
STYRENE		ND	5.0	ND	5.0	ND	0.5
VINYL ACETATE		ND	5.0	ND	5.0	ND	0.5

NOTES:

REPORTING UNITS ARE MILLIGRAMS/KILOGRAM (PPM)

*: THESE COMPOUNDS WERE QUANTITATED ON A 1 TO 10000 DILUTION ANALYSIS.

ANALYST:PAUL MILLS